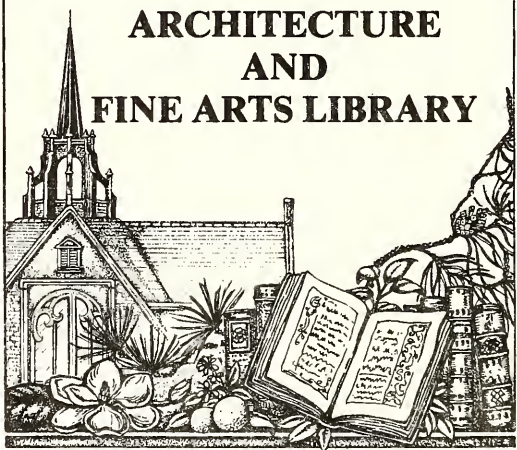




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THE NEW TOWNS
THE ANSWER TO MEGALOPOLIS



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THE
NEW TOWNS
THE ANSWER TO MEGALOPOLIS

FREDERIC J. OSBORN

and

ARNOLD WHITTICK

with an introduction by

LEWIS MUMFORD

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AUTHORS' NOTE

THIS book is meant to give a broad account of the new towns recently created in Great Britain and of the circumstances and lines of thought from which they arose, and an evaluation of their significance for the future of urban development. Short descriptions follow of the first nineteen towns, with a selection of plans and photographs sufficient to indicate their form and character. We make no claim to have produced either a full study of the individual towns or a definitive history of the movement that led to them: such a programme would be impossible in a single book. Some of the towns have already found, and others will find, their own historians, for whom a wealth of data exists in the official reports of the development corporations, local records, newspaper files and the memories of inhabitants. And before long, we hope, the history of the new towns movement will be written by a scholar or scholars with time and endowments adequate to the task.

Our contribution is that of contemporary observers who have taken part in the advocacy of the new towns concept and have been caught up in the controversies that have raged around it—one of us for nearly half a century. That should absolve us from any charge of inhuman detachment. We are more likely to be accused of lack of objectivity by critics who have a bias differing from ours. Certainly we make value-judgments, as anyone must in discussing social affairs, but when we do so we try to be conscious of the fact. In taking sides on some contentious issues we make every effort to be fair to opposing views. Our promise, to ourselves and the reader, is 'to be candid but not impartial.'

Though the subject matter, arrangement and illustration of this book are our joint choice, its parts have been separately written. Chapters I to XI are the work of F. J. Osborn, and Chapters XII to XXX of Arnold Whittick. Each has considered comments by the other, but no complete assimilation of views has been attempted. The divergences we have discovered are few, and none are important, except perhaps in our aesthetic appraisals, and even there we find different theoretical reasons for liking the same things.

Many persons referred to in our historical chapters acquired honorific titles at later dates, and many are no longer living. We may not have been quite consistent in naming them, but generally we have put in brackets titles acquired after the events mentioned.

F. J. O.
A. W.

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THE NEW TOWNS
THE ANSWER TO MEGALOPOLIS

INTRODUCTION

THE growth of cities during the last two centuries went on more rapidly than it had done since the twelfth or thirteenth century, when the historic towns of medieval Europe were taking form. But until the new towns came into existence hardly a single city was conceived as a whole, with public provision for all the physical and social components needed for a well-balanced environment. Meanwhile, in the very act of growth the older cities, which had once met many of the requirements for a high urban culture, became steadily more crowded, more insanitary, more confused, more inefficient, and more unlovable, indeed often positively repellent.

In retrospect, one can easily understand how this happened. For the most part the growth of towns was fostered by forces that had no concern for city life as such: the city was the creation of the land speculator, the estate agent, the banker, of the railroad, the tramway, and the motor car, of the factory system and of bureaucratic business organization. Even those who as architects, planners, or utopian dreamers conceived new forms for the city thought mainly in terms of new materials and mechanical processes: they dreamed of towns covered with steel and glass, of towns proliferating underground. Even now they dream of towns dominated by sixty-storey office buildings and flats, stalking over the landscape in slabs and towers, or they imagine linear towns, continuous urban ribbons for rapid transportation, forming a new pattern in which motorized rapid locomotion would not so much serve the city as become its main reason for existence.

Today these dusty stereotypes still often dominate, openly or secretly, fresh proposals for modernizing the city; for it is perhaps natural for our contemporaries who are still old-fashioned enough to overvalue mechanical invention, mass production, and applied science to conceive the new forms of the city solely in terms favourable to the machine, and to an ever larger exploitation of the machine's capability. In the development of the actual town, fortunately, some attention to biological and social needs, some acknowledgement of public concern, played a part from the middle of the nineteenth century on: parks were laid out, minimal standards were fixed for street widths, for open spaces, for waste disposal and sanitation and eventually, particularly since 1920, for housing itself. But no new norms or standards were erected for the overgrown city itself: its overcrowding, its disorganization, its long dismal journeys to work, above all the continued extension of its area and the growth of its population were looked upon as marks of urban success.

Even those who sought to escape the liabilities of congestion and over-

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growth, by moving to distant suburbs, still surrounded by open country, were in the long run only bolstering the very process that caused them to move away. The notion that there were natural limits to urban growth, inherent in the very nature of city life, and that beyond these limits malformation, disorganization, and deterioration would result, was absent. Just as the smoking factory chimney was regarded, not as a biological menace, but as a happy symptom of prosperity, so the uncontrolled growth of the city was looked upon as a proof of its value for civilization. That the mechanical and financial agents of our civilization might be managed in the public interest, that it might be wiser to build new towns, of limited extent, than to overcrowd and over-extend old ones was not treated even as a theoretic possibility before the end of the nineteenth century.

Until Ebenezer Howard came forth with his proposals in *Tomorrow* no one had the audacity to conceive a new form of the city, which would utilize the facilities of modern technology without sacrificing the social advantages of the historic city. All the goods of city life were embedded, like scattered crystals, in an urban matrix that was steadily becoming more formless and more recalcitrant to human design. The shrewd eye of the novelist, Henry James, appraised this situation far better than most of his contemporaries when he wrote in his *Journal*, in 1881: 'It is difficult to speak adequately or justly of London. It is not a pleasant place; it is not agreeable or cheerful or easy, or exempt from reproach. . . . The fogs, the smoke, the dirt, the darkness, the wet, the distances, the ugliness, the brutal size of the place, the horrible numerosity of society, the manner in which this senseless bigness is fatal to amenity, to convenience, to conversation, to good manners—this and much more you may expatiate upon.'

Many sporadic attempts had been made to improve this or that aspect of the growing city: but no one had attempted to improve it as a whole, and above all, to alter the very method of its growth, so that it might form a new urban pattern, based on well-defined wholes. That contribution was the work of Ebenezer Howard; and its leading ideas were so simple, yet so contrary to the usual assumptions and procedures of our society even now, that their full implications have not been fully understood and assessed, much less carried out. Both here and in many other places, Sir Frederic Osborn has gone into the debt that the new towns movement, originally called the garden city movement, owes to the genius of Howard; and I do not purpose to trespass on the field the authors have so thoroughly covered in this book. What I would like to do is to emphasize certain more general features of Howard's conception, which have sometimes been overlaid, if not forgotten, in the natural preoccupation with more immediate tasks.

Howard's first great contribution to the new towns movement was his conception that the parts of a city were in organic relation to each other, and that there was accordingly a functional limit to the growth of any one element, as to the growth of the whole. Using London as the classic

example of disorganized overgrowth, he sought to relieve the pressure of congestion by colonizing its excess of population in new centres, limited in area and population. This form of growth had been followed by the Greek cities, notably by Miletus, that thriving commercial centre, from the sixth to the fourth century B.C. While it lasted, it not merely prevented congestion, but maintained a balance between town and country that may have been one of the conditions that fostered the extraordinary creativity of Hellenic culture up to the Hellenistic age.

Aristotle's conception, that there was a right size for the city, big enough to encompass all its functions, but not too big to interfere with them, was re-stated in modern terms by Howard. He empirically fixed the right number as 30,000, with another two thousand in the agricultural belt: the same number that Leonardo da Vinci had already hit upon in his proposals for breaking up the clotted disorder of sixteenth century Milan and distributing its citizens into ten cities of 30,000 each. There is nothing sacred about the number itself: Letchworth existed for a generation with less than half this number, and some of the new towns will eventually hold between sixty and a hundred thousand people. But the principle of limits, both lower and upper, is vital: a town of less than fifteen thousand people lacks many of the facilities of a city, above all its variety of occupations; while a town above a hundred thousand does not gain enough in variety to compensate for a loss in accessibility and in the vivid sense of a concrete, visible whole, where the activities of urban life come to a focus.

No one who has grasped Howard's realistic understanding of the function of the city could possibly confuse the garden city or the new town with a suburb. Unfortunately, this confusion is still rampant even in town planning circles, where it is nothing less than a mark of inadequate professional preparation. It is true that, by an accident of history and taste, all the existing new towns in Britain, beginning with Letchworth Garden City, have been built on the open pattern, with ample private gardens: a pattern that was evolved during the nineteenth century for a much smaller community, the upper middle class suburb, holding usually from two to six thousand people. Some of us believe that this change in scale, area, and numbers, without a co-ordinate change in design, has been one of the chief oversights of the new town planners, which needs serious reconsideration. But the suburb is, by definition, almost exclusively a residential area, occupied by people whose business takes them to a distant city. Such a specialized fragment must not be confused with a new town; for the latter must be big enough to accommodate all the daily functions of a city, industry, business, education, government, and promote all manner of other social activities.

Four fundamental principles governed Howard's concept of the new town: limitation of numbers and area, growth by colonization, variety and sufficiency of economic opportunities and social advantages, and control of the land in the public interest. Out of this a new kind of city would emerge, in a balanced, many-sided, inter-related, organic unit.

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Good urban design would relieve the citizen of the need for travelling long distances to obtain access either to economic opportunities or to the recreations and relaxations of the countryside. The identifying symbol of this new kind of city was not the private garden or the public park, but the permanent green belt that surrounded the urban area and defined its limits of settlement. The translation of these principles into the realities of the new towns movement is one of the most encouraging manifestations of our age. In a period when automatic and irrational forces are driving mankind close to its self-annihilation, the new towns are a victory for the rational, the human, the disciplined, and the purposeful: a proof that sound ideas are not condemned by massive human folly or institutional inertia to remain inoperative.

Howard's views, contrary to the usual impression, were not limited to decentralizing the over-congested facilities of London and building up small, self-sufficient towns: people who imagine he stopped there forget that Howard himself was a Londoner by birth, and too much of a Victorian to despise the special technological and cultural facilities of his age. On the contrary, Howard realized that there were advantages in large numbers that no small city of limited size could hope to achieve by itself. The chapter in which Howard considered these facts, that on 'Social Cities', is perhaps the most neglected chapter in his still neglected book; but it happens to suggest a further stage in the new towns movement—and in urban development everywhere—that should long ago have been claiming attention.

In discussing social cities, Howard recognized that no small city, no matter how well-balanced, could be wholly self-contained: there were many specialized functions, easily performed in a big city because of its immense reservoir of varied occupations, its diversity of human interests, and the accumulation of capital resources that no smaller unit could encompass. So, too, there were many activities, such as those of a symphony orchestra or a technical college, that required a pooling of population if they were to be maintained. If he had analyzed the problem a little further, he would have reached the conclusion, I have no doubt, that the full social heritage of modern culture could no longer be encompassed by a single unit, with the limited numbers of the historic city: it required, rather, a much larger population, inter-communicating and accessible; and this need for a larger container was responsible for the continued growth of metropolitan areas, despite all the patent disadvantages traceable to the fact that the change of scale and of technical facilities for transportation and communication had not been accompanied by a change in the pattern of growth and political organization.

Howard did not suppose that a single garden city, or even a scattering of such cities, would be able to handle this problem. He called, rather, for the creation of a regional unit that would bring into a single organized system at least ten cities with a total population of three hundred thousand, bound together by a rapid public transportation system that

would unify the cities and make them operate, for any purpose that involved all of them, as a single unit. Howard did not elaborate this idea, either in *Garden Cities of Tomorrow* or his later writings; for he was too pre-occupied with the problem of getting the first two experimental cities into existence to go on to the next step of creating the larger unit in which they could function, with an even higher degree of autonomy, as no longer dependent upon the facilities uniquely offered by a London. But Howard had in fact outlined a new type of municipality, called later by Clarence Stein and his colleagues, the Regional City: a city whose articulated spatial organization, whose direct union of urban and rural facilities, whose social and economic balance would be the rational equivalent of the sprawl and clutter and needless confusion of the existing metropolitan areas and conurbations.

Howard called this new grouping of cities, each limited in size, the town-cluster; and he foresaw that once his model new town was built and validated by experience, the further organization of such cities should lead to the creation of a new municipal structure, whose parts, though spread over an area larger than the County of London, might with our modern facilities bring together a million people, much more closely than they were at the beginning of the nineteenth century, when that number was confined to the City of London and its contiguous boroughs. As with Howard's notion of the proper norm of population for a single city, there is nothing inviolable about his estimate of the number of cities or the total population needed to perform the functions of a metropolis. The proper size for 'town clusters' or 'regional cities' must be established by practical experiment. But even if sufficient land were available to establish green belts around every borough, I would suspect that the nine million inhabitants of Greater London are too large to function as a single municipality; and that a considerably smaller group, of the order of a million, would be adequate to reproduce, and often improve, every metropolitan function.

The creation of a new kind of metropolitan area, based on a union of greenbelt towns, and the establishment of a system of local government, federal in structure but thoroughly integrated, is perhaps one of the principal tasks opened up by the very success of the new towns movement to date. But these are not matters in which political action alone is called for. The wider success of the new towns movement, as an alternative to functionless congestion and formless sprawl, depends upon the readiness of all the other institutions of a going city to re-establish themselves on this new principle, of controlled and normalized growth. Each growing institution, be it a factory, a hospital, a library, a university, a department store, must handle the problems of quantitative growth, and seek to establish a dynamic equilibrium and a controlled method of growth. Only on such terms will it further its own development and harmonize it with the larger regional pattern necessary for the orderly growth of urban communities. What I would term 'Howard's principle'

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X —the principle of controlled growth by limitation, colonization, redistribution, and integration within a larger spatial and functional unit—applies to every human institution.

The successful founding of Letchworth Garden City was the first step in establishing a better system of urban growth; and the success of its younger sister, Welwyn Garden City, showed that the new stock was viable and hardy, capable of wider reproduction. With the institution of the new towns policy on a large scale the way has been opened to carry Howard's bold vision to a fuller, if not its final, consummation, by a systematic application of his principles to all the components of the city, and by the deliberate union of many related cities into a new kind of urban unit. With the kind of integrity and stability that begins at the level of the neighbourhood unit, and with the variety and diversity that furthers interplay of larger forces, often arising outside the local area and transcending its limitations, the new urban constellation will have all the dynamism of a great metropolis. Toward this further development the new towns movement has already gone far; but even greater possibilities now loom before it.

LEWIS MUMFORD

Chapter I

NEW TOWNS IN MODERN TIMES

'I am of opinion that if, instead of one, we had twelve great cities, so many centres of men, riches and power would be more advantageous than one. For this vast city¹ is like the head of a rickety child.'

—FLETCHER OF SALTOUN (1703)

ALL towns must have had beginnings, and in that sense were once 'new'. Of many the origin pre-dates recorded or hearsay history. And not a few that appeared at various times, whether adventitiously or by deliberate foundation, were, as maps of almost any country reveal, regarded as upstarts or parvenus by near-by inhabitants and carry to this day the labels of their former novelty; such place-names as Newton, Neustadt, Villeneuve, Novgorod, Novigrad, are found everywhere, in all sorts of combinations. Most of these are now so sedately elderly and so woven into their backcloth that the significance of their names passes unnoticed. An interesting history might be written of them, but they are not the subject here.

The 'new towns' with which this book is concerned are those that in the twentieth century have been purposefully founded, planned and developed, first in Great Britain and subsequently in other countries, as an alternative and corrective to city overgrowth and congestion on the one hand and unduly sparse or scattered human settlement on the other hand.

The original (and still most weighty) reason for the building of new towns, in the minds of their advocates and pioneering experimenters, was the necessity of reducing the concentration of people and workplaces in very large towns, which otherwise cannot be relieved of congestion, disorder and squalor and rebuilt on a fully healthy, pleasant, socially satisfactory or efficient pattern. A complementary motive was that new towns based on modern industry in impoverished agricultural regions, declining in population owing to mechanisation and other technical changes in farming, would bring fresh vitality and better services into such regions. In considering the new towns movement this double intention—of relief to overcrowded cities and reinvigoration of sparsely populated country districts—should be kept in mind. Too often the new towns are discussed as if they were meant to be ends in themselves, almost irrelevant to the major problem of the redemption or renewal of the existing cities, and ruthlessly indifferent to rural interests. They were never thus dissociated in the minds of their proponents.

¹London; population then about 500,000.

During the sixty-odd years since the movement was initiated further, related but slightly different, motives for new towns have emerged: the desire to gather into more satisfactory communities people living in scattered and ill-equipped coal-mining or small-industry villages, or to knit into better shape and endow with fuller town facilities poorly-planned urban developments. Thus while the new towns were first conceived as instruments in a process of decentralisation or dispersal from towns demonstrably too large and crowded, they can also function as means of producing a reasonable degree of concentration for quasi-urban units that are demonstrably too small.

In the first British new towns (the two garden cities) a significant departure has also been made in the conception of town and country planning—that of continuous intelligent control of development. Very many towns have in the past been founded with premeditation and laid out with good original plans: for example, by military rulers like Alexander of Macedon, his successor Seleucus Nicator, St. Louis of France and Edward I of England, by the Roman Empire and other colonizing nations, by great landowners, and by industrial companies. But seldom, if ever, has the future development of such foundations been considered, or provision made for maintaining the intentions of the original plans, ensuring their due adaptation to economic and social changes, or controlling or limiting their growth in extent or density. Here and there the patterns of their original plans can be discerned in geometrical arrangements of existing streets, but in the main they have been overlaid by later developments of a more chaotic character, as for instance in Edward I's Kingston upon Hull, and often the systematic layout is only discoverable by the labours of archaeologists.

What further distinguishes today's new towns is that they represent the first modern attempt to apply *scale* to urban development: to define limits of town size and population; to create and retain a measure of relationship between the functional zones within towns and between town and country; to provide some degree of balance of local occupations and residence; and so to arrange and maintain the plan that services and facilities in frequent use are easily accessible to the inhabitants. In the absence of a fairly definite idea of the intended ultimate size of a town it is clearly impossible to plan it in advance. What acreage, for example, should be reserved for the shopping and civic centre? How wide should the main roads be? A planner who has to assume that his town may never cease to grow cannot arrive at even approximate formulations for such dimensions: the best he can do is to think of a number and, to be on the safe side, double or treble it. The present state of towns originally carefully laid out, that have survived from ancient and medieval times, shows what happens when the scale of a plan is overwhelmed by unanticipated growth. No matter how orderly the original design, in the absence of continuing control of development confusion of uses must arise. No matter how generous the space allowed in the layout, central constriction inevitably emerges if the town's expansion is unlimited.

(It may be doubted whether modern city planning has yet fully absorbed this historical lesson.)

THE GARDEN CITY CONCEPT

The modern new towns movement was started by (Sir) Ebenezer Howard (1850–1928), who published his book *To-morrow: A Peaceful Path to Real Reform*¹ in 1898 and formed the Garden City Association² in 1899. His ‘unique combination of proposals’ was really new: a cardinal invention in the sphere of urban technology.

There were, as Lewis Mumford says in his introduction, foreshadowings of elements in Howard’s invention in ancient and renaissance writings. Most of these however were statements of ideal or theoretical principles rather than prescriptions for immediate action in town founding or social control. Perhaps the closest approach to the pattern of town and country that Howard had in mind is to be found in the *Utopia* of Sir Thomas More (1516) in which a very attractive ideal of towns of limited size and open internal layout, spaced out at considered distances over the agricultural countryside, is presented. The *Utopia* is important as evidence of the character and arrangement of towns that seemed desirable to a man of culture who was aware of the functional role of towns in his time while fully sympathetic to common human aspirations. More’s capital city, Amaurote, with its terrace houses and long gardens, its grouping of social buildings, and its contact with the countryside, is much more like a modern new town than today’s London or New York or Paris. He was also definite about the provision for population growth by colonization or new foundations rather than by simple expansions. But it cannot be seen that this ideal much influenced urban development in his time or later. Nor did he foresee the complexity of future civilization that would necessitate or result from much larger regional groupings of population.

With the Industrial Revolution and its enormous disruption of the older order, the flow of population to towns, and the phenomena of great individual wealth alongside mass poverty and instability of employment, there were among movements of compunction and reform many projects for the creation of small organised communities in which powered factory industry (then emerging into importance) might be combined with agriculture, together with sets of social and educational facilities selected to foster the kinds of human behaviour that the promoters thought would make for happiness—or for goodness. These, unlike the formulations of Plato, Aristotle, More and others, were proposals for group or individual action. As a rule they had little permanent practical outcome within the countries of their origin, though they influenced colonial developments in the New World. The most remembered of these projects were those of Robert Owen (1771–1858) and his

¹Revised and reissued 1902 as *Garden Cities of To-morrow*. Latest edition, with introductions by F. J. Osborn and Lewis Mumford, 1945.

²Later renamed the Garden Cities and Town Planning Association and now known as the Town and Country Planning Association.

French contemporary F. M. C. Fourier (1772–1837) and their followers, by whom several experiments were made in England and America. These did not survive as closed or self-contained economic communities, probably because they were too rigid and paternalistic in conception and did not allow for individual enterprise. The only organic industrial-agricultural units of this ‘communal’ type that lasted for more than a few years were those founded overseas by religious bodies like the Jesuits and the Rappites, which had a quasi-monastic discipline under a hierarchy and a common creed conditioning social conduct.

These projects and experiments, and the prescriptions for systematic town-founding in overseas colonies made by Granville Sharp (1794), Edward Gibbon Wakefield (1829) and others, are of interest to students of town planning history and of modern social reform movements. So also are the proposals for home colonization, usually seeking to resettle poverty-stricken or unemployed workers in industrial-agricultural villages or small town communities as a corrective to the crowded and debased conditions in the industrial cities, put forward by John Bellers (1696), Count Rumford (Sir Benjamin Thomson) in Germany (c. 1790), James Silk Buckingham in England (1848) and many later writers. Howard was influenced by Wakefield and Buckingham, though not as much, we think, as the generous acknowledgments in his book imply. A much stronger influence on his thought was the preoccupation of reformers of his time with the ‘land question’—the worry about the private and unearned appropriation of increments of site values associated with the growth of the urban population and its economic activities. This issue has since receded in political prominence, owing to the change in the ratio of income from land to that from other forms of property, and to the evolution of graduated taxation of income from all sources. But it is by no means an extinct issue. It arises in a new shape through the conspicuous effects of public planning control in increasing values on some parcels of land while limiting it on others. We cannot discuss here the general problem of compensation and betterment.¹ The increase of land value arising from urban development is however an important element in the finance of new towns, and we shall return to the subject.

VALIDITY OF HOWARD’S THESIS

Howard’s criticism of large towns, with London in the forefront of his mind, remains valid today, though many things have changed; in Britain some of the most dramatic squalor has been removed, but further growth has aggravated other serious evils, such as high-density tenement housing and the long and burdensome journey to work and its corollary traffic congestion. Details of Howard’s suggested town plan, which was diagrammatic, and of his financial and administrative proposals, are naturally out of date. But his book is worth reading today for

¹The classic study of the problem is the (Uthwatt) *Report of the Expert Committee on Compensation and Betterment*, H.M.S.O., London, 1942.

its easy and charming style, for its blending of benevolent idealism and basic commonsense, and for its importance in urban history. Unlike all the earlier utopian or closed-community schemes, Howard's conception of the planned and organised new town is fully adapted to the modern industrial system and the way of life the system requires and makes possible. It is briefly yet fairly completely summed up in the definition adopted in 1919 by the Garden Cities and Town Planning Association:

'A Garden City is a Town designed for healthy living and industry; of a size that makes possible a full measure of social life but not larger; surrounded by a rural belt; the whole of the land being in public ownership or held in trust for the community.'

A key factor in this definition is that the town's limitation of ultimate size is to be guaranteed by the reservation around it of a belt of rural (and mainly agricultural) land. When Howard wrote, the prospect of continued growth was accepted uncritically—by most people as inevitable, by many as desirable. Municipal pride in sheer numbers, competitive claims to be the largest town in the world or in the state, or the most rapidly growing town in some frame of reference, were regarded as natural and worthy. Londoners for long boasted of their numerical pre-eminence, and New Yorkers have gloated over taking from London this unhappy leadership.

The attitude is by no means dead, but it has lost assurance. We begin to see that it is about as ridiculous as it would be for a lady to claim the title of 'Mrs. World' because she had the biggest waist measurement, or to brag that her 'vital statistics' were advancing faster than those of any other lady in her lunch club. Yet the best-selling success of *The Guinness Book of Records*¹ shows that there is a widespread popular interest in statistical peaks of any kind. The Heaviest Man on Earth may understandably derive a speck of consolation from his supremacy; but he deserves commiseration rather than congratulation. And so do the swollen cities, when the consequences of their magnitude are understood.

Once it is realised that a town can be too big, the question arises as to what is the best or optimum size for a satisfactory town, taking into account the requirements of modern industry and commerce, residential standards, access between home and work, and facilities for recreation, entertainment and culture. There is no universal answer. But it is a question that we are beginning to see must be continuously studied in the light of current economic and social needs and local geographical considerations.

In a country like Great Britain where there are already many urban agglomerations inconveniently and unnecessarily large, and many kinds of industry and business that can be economically run in local establishments employing not much over two or three thousand persons, and many that employ smaller numbers, it is practicable to have a considerable number of towns with populations of the order of 30,000 to

¹Guinness Superlatives Ltd., London, 7th Edition, 1960.

60,000. Towns of that size can be planned to have a predominance of family houses, with decent gardens, within walking or cycling distance of their civic centres and places of work as well as of their country belts. If they are much larger, densities or distances have to be increased, which may be a serious offset to any capacity given them by increased size to sustain larger industrial establishments or a more complete range of social and cultural institutions. The problem of the optimum size of towns is that of finding the best balance between these conflicting factors: we discuss this more fully in Chapter IX.

When the principle of limitation of the size of individual towns and of the preservation of green belts (or a general background of open country) is accepted, for all time ahead changes in the amount of population and employment in each town are likely to become a subject of public and social governance. Difficult economic and social assessments and forecasts, and difficult measures of control or influence, are involved in the process, but they will have to be made. The new towns movement, and its component element, the movement for green belts and countryside preservation, have not produced a commonly-agreed formula for the best size in towns, nor is it conceivable that there will ever be a single universal formula, but they have placed the question of size once for all on the political table.

Howard's own formula for new formations—a population of 32,000 in the initial garden city and its rural belt and 58,000 in a later town to be central to an associated group of towns—was a very useful opening draft. He was well aware that for some of the purposes of regional economic and cultural exchange the interconnected group would be necessary. Indeed, neither he nor the experienced business men who joined him in building the first two new towns conceived them as closed economies isolated from national or international trade and industry. In this respect they made a decisive departure from the typical 'Utopian' conception. Howard has been criticised for being too specific, but whatever doubts there may be about his actual figures, his definiteness was strategically shrewd. He was proposing a practical demonstration of a new product—what a designer of a mechanical appliance would call a 'bread-board model' or prototype. If he had been vague in his specification he could never have got together a company of men capable of action. The remarkable thing is that Howard's 'shot' at a convenient order of magnitude proved in practice to be such a good approximation. Nearly 50 years later the New Towns (Reith) Committee, after exhaustive consultation and deliberation, suggested as an 'optimum normal range' 30,000 to 50,000 people in the built-up area—almost exactly Howard's proposed size.

PLANNING AND ECONOMIC ENTERPRISE

In the beginning Howard's thought was to find some way of combining the idea of Buckingham and other projectors of communities on the human scale with a local and exemplary solution of the land-value

problem. But his real inspiration was to add to this combination two further elements. He saw that the collective or quasi-public ownership of a whole town site did not necessitate the collective conduct of industry and business; these could be left to private enterprise or voluntary co-operation provided that the increment of value was secured for the community by the retention of the freehold of the whole estate of the new towns and the grant of sites on long leases. And he saw also that unified ownership of the whole estate made possible the prevention of development in the agricultural belt, and good planning and maintenance of good planning in the town area, including the measured allocation of zones for the various functions within the town. For the use of the leasehold system as a means of the continuing control of land-use there were of course precedents in the practice of aristocratic landowners. But it had never before been applied to a whole town or extended to the reservation of a green belt around a development to preclude its merging into a larger urban mass.

Much of the modern criticism of Howard and his associates arises from a misunderstanding of their basic assumptions. They were not 'Utopians' but practical men well aware of economic and social realities in a time of rapid scientific, mechanical and cultural change, which on the whole, as typical Victorians and Edwardians, they saw as 'progress.' But they were not philosophers of logical analysis. They would have chuckled at Bertrand Russell's statement: 'Hence it follows (though the proof is long) that "4" means the same as " $2+2$ "'. It seemed to them obvious that $2+2=4$. Similarly, they assumed that in their new towns the industries and businesses would be part of the larger economy, drawing supplies and ideas from and distributing products to the world at large, and in a ceaseless state of flux. They never thought of planning from above either the individual enterprises or their infinite economic inter-relationships. They confined their attention to setting certain geographical limits to their grouping. Modern town and country planners proceed on the same principle. What they do, in order to produce or maintain certain standards of convenience and pleasurable living conditions, may well have effects on economic (and cultural) developments. But they are not planning these developments; they are merely conditioning them spatially, because it has become demonstrably necessary to do so.

Chapter II

THE FUNCTIONS AND FAILINGS OF TOWNS

‘Among the noble cities of the world that Fame celebrates, the City of London of the Kingdom of the English, is the one seat that pours out its fame more widely, sends to farther lands its wealth and trade, lifts its head higher than the rest. It is happy in the healthiness of its air, in the Christian religion, in the strength of its defences, the nature of its site, the honour of its citizens, the modesty of its matrons; pleasant in sports; fruitful of noble men. Let us look into these things separately’.

—WILLIAM FITZSTEPHEN: *LIFE OF THOMAS BECKET* (c. 1180)

TOWNS occupy so dominating a position in the human consciousness that it is very difficult to get them into a clear mental picture. For most people in modern times they have been the background of life from the earliest years, no more to be questioned than the fundamental facts of the world of nature. The way of life they impose, with its infinitely complex blend of blessings and pains, is taken for granted. And if blessings weaken and pains increase, a normal commonsense person is not disposed to run his head against solid and seemingly immovable masses of brick or concrete. Thus it is not surprising that among townspeople an attitude prevails of acceptance of towns more or less as they are: according to temperament a grumbling or cheerful acceptance, approaching complacency on the part of those not frequently brought up against the worst urban failings and those having alternative domiciles to which they can at will retreat.

Even the spectacular physical changes that occur in many towns tend to be looked on by the majority of people as dictated by mysterious and implacable laws of evolution rather than as resulting from human actions governed by human wills. The new phenomena are observed with dislike, pleasure, or a merely curious passivity. They are rarely thought of as controllable or requiring control in the general interest. Impulses to complain of town management, and to demand that something be done, do occasionally arise concerning municipal services and movable or superficial features. But the fabric of towns—their buildings, their arrangement, and their street pattern—is commonly taken as somehow fate-given.

Acceptance and complacency have never been universal, however. Along with incalculably vast contributions to the power and wealth of society, towns, especially the larger and more successful of them, have brought upon mankind so much injury and distress in the last few thousand years that in almost every period there have been respected thinkers and moral leaders who have doubted whether towns could ever

provide a good way of life for our species. Many philosophers have seriously urged mankind to return to the farm and village and to build civilization on another pattern altogether. There has often been a measure of popular response to this idea: 'Back to the Land' movements have frequently recurred among urban populations.

The majority of people, however, and most leaders of thought, have believed in towns and regarded their defects as temporary and remediable, and have maintained hope that through the further working-out of beneficent evolution, or by human effort based on experience, they could in time become wholly satisfactory. This hope has been repeatedly disappointed. Man being an optimistic as well as obstinate animal, it persists. Yet in our own age of unprecedented material advances, when we see almost every kind of manufactured article or organised service improving in acceptability to consumers, and in most cases in real quality and efficiency, towns stand out as a strange exception.

Let us try to place this extraordinary paradox in perspective. Towns are the most powerful instruments, as well as the most conspicuous results, of man's constructive and organizing impulses and talents. If they cannot in the light of modern research justly claim the title of 'cradles of civilization' (since that may belong to the homesteads of the earliest settled agriculturists, or even to the shifting camps of hunting or pastoral nomads), they have certainly been civilization's main nursery. Towns,¹ in the commonly understood sense of lasting assemblages of buildings and occupants grouped fairly near to each other, have taken the major part in the association of activity and specialization of function that have led to the immense and still evolving complex of goods, services and gratifications characteristic of civilized societies.

SECULAR URBAN EVILS

Thus the authors of this book dutifully align themselves in principle with the believers in towns. (Not to do so might seem as silly as to speak disrespectfully of the Equator.) But we cannot join in the enthusiasm unreservedly. Of all the expedients of man in pursuit of satisfactions and power over things, towns have been the least amenable to considered and intelligent human organisation. Much of their past record has been indescribably shocking. Time and again they have produced social evils on a colossal scale: they have killed, disabled and destroyed the happiness of millions of their inhabitants; and even in their latest phases many of them are largely thwarting the possible advances in productive

¹The word 'town', as used in this book, includes 'city', except where the context implies a differentiation between a town of moderate population and one of very large population. In the U.S.A. the generic word is more usually 'city'; the words 'town' or 'township' are used to include a minor local government unit having only one or more quite small villages or even a wholly scattered population, which in England would be named a 'rural district' and in Scotland a 'landward area'. These differences of usage derive from the fact that the Anglo-Saxon word 'tun' or 'town' originally meant any human settlement from a single homestead upward. In Scotland the word 'farm town' is still current for the building or buildings of a single farm.

efficiency and culture offered by the diversification of skills and interrelation of effort of numbers of people.

The larger and more populous the towns, and therefore on the face of things the greater their potency for beneficial interchange, the more devastating have been their periodic disasters and chronic social defects: recurrent plagues and pestilences, famines, catastrophic fires; and persistent patches of decay, poverty and human degradation, where masses of people have often been hidden away from the compunction and charity of more fortunate fellow citizens. These deplorable happenings and features have over the centuries been as characteristic of towns (especially large towns) as the splendid churches and palaces, noble avenues and parks, pleasant residential districts, and spacious suburbs, in which they rightly take pride. It is true that only a considerable concourse of people within a range of practicable communication could have made possible the great manufacturing establishments, commercial offices and exchanges, shopping centres, theatres, museums, art galleries, universities, libraries and other institutions; and that these are the seeds and fertilisers, as well as the fruits, of a high civilization. But a guide-book view of the rich accumulation of monuments and facilities, though all too common, is not enough. We have to be conscious of the violently contrasting aspects of towns if we are to rid them of their horrors while cherishing their benefits and beauties. And we have to consider whether, in view of the recent evolution of means of communication, physical and mental, close spatial grouping of large numbers of people is any longer necessary or conducive to the further advance of civilization and culture.

CIVILIZATION AND INTERCOMMUNICATION

We cannot in this book discuss at length the role of towns and cities in the evolution of civilization. The variety of the towns that have appeared and disappeared in history and exist today is so vast as to outsoar the most encyclopaedic knowledge; and their individual complexity, especially that of the larger cities and conurbations of today, is almost beyond the grip of analysis. Moreover, the activities and relationships of persons and groups of persons within any town are in a perpetual state of flux and change, of growth and decline. Even the modern planning surveys, which give a more complete picture of the physical structure and features of towns than has ever been available before, cannot be wholly up to date; they have to be considerably revised every few years.

Nevertheless we think one or two useful generalizations can be made with some assurance. Civilization and culture, at any stage, depend upon the interchange of things, services and thoughts between numbers of people of different or specialized occupations, talents or skills. Some of these occupations or skills (in manufacture, for example) require the assembly, in place and time, of groups of persons working together in substantial numbers. Others are pursued by small groups, by families,

or by single individuals. To permit of the interchange of the results of the activities of these persons and groups communication between them is necessary. And since nearness facilitates communication, the development of associated activity, specialization and interchange is (certainly has been historically) bound up with the development of fairly close spatial groupings of numbers of people—that is, of towns.

A second simple generalization is that as the variety of the occupations and skills interchanged increases, or the groups associated for particular products or services grow in size, the number of persons taking part in the interchange also increases, and in so far as the convenience of proximity continues, the size of the whole assembly, or town, also increases. Thus there is (or has been historically) a close connection between the development of civilization and culture and the growth of towns and cities.

This analysis is as old as Plato's dialogues, and we would apologize for its seeming obviousness or naivety were it not for the more mystical or romantic impulses to which the existence and growth of towns is by some urban enthusiasts ascribed. That some people are drawn to settle in towns because of a definite delight in the kind of physical surroundings, or the social or cultural milieu, they provide is not in question; nor that familiar scenes or personal habitude may induce love or affection for a particular town. But the emotional attraction to towns is not in our belief the fundamental *raison d'être* of their origin or growth. It is a resultant rather than a major cause of the development of towns and the complex of interchanges that assemblies of population and wealth have made possible. Historically, indeed, the 'charm of the city' and much of its characteristic culture may fairly be considered a by-product of its essential function. The secular exodus of the most prosperous and best educated citizens to outlying suburbs and country villas supports this view.

Since the advance of civilization has been bound up with the increasing diversity of interchange between persons and groups, so long as spatial proximity is necessary for certain elements of this interchange the growth of towns is easily explicable. In modern times in Britain and other industrialised countries, the main reason for that growth has been the expansion of manufacture, and in recent decades the expansion of the lighter industries and commercial and service businesses, many of which are not tied to sources of raw materials or power. There is a very strong natural tendency, however, for new industry and businesses to settle where population already is. One of the best brief studies of the location of industry in Great Britain is that of Professor J. H. Jones in an appendix to the Barlow Report¹, in which he writes:

'As Adam Smith long ago pointed out, of all baggage human beings are the most difficult to remove. People sought, and found, the kind of work to which they and their locality seemed most easily adapted in a

¹*Royal Commission on the Distribution of the Industrial Population: Appendix II: 'A Memorandum on the Location of Industry' by J. Harry Jones. H.M.S.O., 1940.*

changing economy, and their choice was determined by numerous influences, not the least being the urgency of the need to do something that would enable them to live, and the strength of the desire to live as generously as possible.⁷

It is a common experience in those countries which have expanding populations that (unless and until governmental policy intervenes) the larger cities grow faster than the medium-sized cities, and these grow faster than the small towns, some of which, being based on agricultural economies, even decline in population.

It is this phenomenon that is now causing social or political concern. The reasons for it are not far to seek. In a free-enterprise society the movements of population are simply the sum of the movements of individuals or groups of persons associated in business activity. Other things being equal, a manufacturing or commercial entrepreneur will seek a location as near as possible either to the largest consumers' market for his goods or services or to a pool of employable workers; and both these advantages coincide in the largest local aggregations of people. The national network of railways and roads, which both as cause and effect focus on the larger centres, are also obvious conveniences to firms for the assembly of materials and the regional, national or wider distribution of their products—at any rate up to a point that we discuss below. To the workers, of all grades, the larger city offers many and diverse opportunities of employment, and over the long periods during which a fairly high percentage of unemployment has been endemic this has been a vital factor.

Thus what we, as critics of the process of city expansion, consider a vicious circle—perhaps we should say a vicious spiral—of reciprocal attractions has come into being; business enterprises going where they can find the greatest assembly of customers and workers, and workers flocking to the same places in the hope of a choice of jobs. The process is plain and simple. No subtle analysis of the magnetic attraction of the town, of its architectural 'urbanity' or grandeur or its higher cultural advantages, are necessary to explain it. (It is interesting that Professor J. H. Jones, in the study of location cited above, does not even mention cultural attractions.) The developmental spiral continues in operation even when the cultural by-products diminish in appeal. It is only checked when economic and physical disadvantages appear, such as high rents and travel costs or extreme traffic congestion; or when, at long last, governmental restraints on city growth are applied.

THE CONSEQUENCES OF TOWN OVERGROWTH

Study of any large town shows that as it grows the pressure on its internal space, especially in and near its centre, intensifies. Values of land rise because there are competitive demands for it and more persons seek access to the central area to work in it and to do business with it. Thus internal journeys multiply with size. In time this necessitates additional or wider streets and extra space for vehicles to load, unload,

wait and park, the area for which has to be deducted from the building area and further intensifies the use of what remains. The dwellings of inhabitants, for reasons of economy in time, exertion or journey cost, come to be grouped as near to the centres of employment as the desired or tolerated standards of residential space permit.

In a large town, as population and employment grow, business establishments in the centre (industry, commerce, retail trade, entertainment, etc.) naturally expand, and some of this expansion encroaches on the adjoining residential areas, thus forcing the inhabitants to crowd more closely together or to travel to and from a somewhat greater distance. Usually both effects occur. The families who can best afford it move to the town's outskirts, where they can obtain newer houses, cleaner air, more garden space and (for a time) access to the open country. Those who have to be, for occupational or other reasons, close to the centre, become packed tightly together; backyards are built over, former middle-class houses are sub-divided into small apartments or one-room dwellings, and thus slums and overcrowding emerge, and often reach such a degree of squalor as to call for compulsory closing and clearance in the interest of public health. It is a queer paradox that in growing and highly prosperous cities old and dilapidated dwellings occupied by low-income workers are seldom commercially rebuilt for the same class. This is due partly to the fact that in conditions of population pressure such dwellings are still lettable—at rents low per unit but high per square foot of floorspace—and partly to the expectation or hope of owners that their sites can be disposed of at business land values. (Strangely enough, in Britain today, where under modern planning law a change of use from housing to more profitable purposes requires governmental permission, and no compensation is payable for refusal, the valuation of urban land publicly acquired for housing purposes is still commonly far higher than its conceivable market price for the commercial provision of such housing. We confess that we have never understood the rationale of this. Surely under the laws of classical economics, land that cannot be built upon except at a loss that has to be covered by a public subsidy has a negative market value?)

Towns being infinitely complex, any brief sketch of the factors in and mechanism of their growth must be in some degree over-simplified. But governmental policies for dealing with urban problems have been delayed and misdirected by the lack of general understanding of the inter-connection between population increase, central intensification and outward spread. The suburban expansion of a town, the increase of the bulk and height of business buildings in its centre, the massing of persons in dwellings and of dwellings on sites, the lengthening of daily journeys, the congestion of rail and road traffic, and the shortage of recreation space, are the results, and at the same time the condition, of the one process—the growth of the population of the town. It is possible by local expedients—street widenings, subways, freeways, over-passes, one-way routing, robot signals, multi-storey car parks, and other costly devices

—to carry some increase of traffic; but so long as a town or agglomeration remains a centralised unit and its total population grows there will be greater pressure on space for housing and other land uses and more and longer personal journeys.

Conceivably, if population were static, savings of movement could be obtained by the transfer of some employing businesses from the main core to middle-ring or suburban sub-centres. But such 'sub-centralization' would be useless unless it were coupled with an equivalent reduction of the amount of employment capacity in the inner core. It would merely furnish additional growing points for the whole agglomeration. A proportionate reduction of the employment capacity of properties in the core would be enormously costly in compensation. Some positive reduction there may come—indeed must come in time—but we have first to put a stop to the positive increase of the town's overall employment capacity and total population.

Traffic congestion, accentuated by the growing use of private motor-cars, is an affliction in itself, but in its most acute forms it is a symptom of the deeper disease of urban hypertrophy, which has other and socially even more injurious effects, though they do not stir nearly as much political and press excitement.

THE ENVIRONMENT FOR LIVING

The worst of these is the effect on the everyday human environment—in the home, the school, the park and playing-field, the journey to work, and the workplace itself.

We take London as our main example, because as the largest city in Britain it exhibits the consequences of overgrowth observable in all large towns at an advanced stage; and particularly we consider its central part—the County of London, an administrative area of 75,000 acres and $3\frac{1}{4}$ million population, locked in on all sides by the continuous urbanized tract of Greater London, extending to a radius from the centre of about 12 miles and containing between 8 and 9 million people.

First, housing. In former and far poorer times, including the Victorian and Edwardian periods, London, though it was grossly overcrowded and had vast areas of squalor, was almost wholly a town of what had originally been single-family houses with gardens or at least back-yards. In size, construction, fittings and condition many of these dwellings were of low standard; but the prevailing type of small dwelling, often in a debased form derived from the country cottage, was the type that the great majority of British people, including Londoners, preferred then, and prefer today. The prevalence, almost universality, of the single-family house in Britain was a source of national pride.

When the 'housing of the working classes' became in the main a public responsibility after the 1914–18 war, the Ministry in charge of it in an advisory manual to local authorities (1919) said:

'In spite of the rapid development of large towns and urban centres, the self-contained cottage has continued in this country to be the cus-

tomary means of housing to a much greater extent than characterizes other countries which have undergone similar development, and this comparative freedom from the tenement dwelling has been regarded with envy by those countries and cities which have had the misfortune to adopt the tenement system to any great extent. This advantage should be maintained, and this will be the normal policy of the Ministry.

'Even where rehousing has to be carried out on the cleared area, and the cost of the land may have been considerable, it will be desirable to adopt the cottage dwelling. The fact that the adoption of tenements would allow a larger number of tenements to be placed on the site and reduce to some extent the cost of land per dwelling will generally not outweigh the disadvantages of the congestion of buildings on the site.

'The Ministry have no wish to adopt any pedantic attitude on the question. But it must be borne in mind that such dwellings are opposed to the habits and traditions of our people, that they are condemned by the best housing experience, and that, as already stated, where tenements have generally prevailed, opinion is steadily becoming opposed to them.'

THE FALL IN HOUSING STANDARDS

No housing expert, no elected authority, no person in touch with popular feeling, would have questioned this at the time. The watchword for post-war reconstruction was Lloyd-George's 'A Land fit for Heroes to Live in'. And in the early stages of the great inter-war housing effort, the local authorities of large towns, including the London County Council, were loyal to the popular demand. But though their provision of new dwellings was numerically great, their effort to maintain the house-and-garden standard was defeated after a few years by the lack of space.

In the ten years 1920-29 the LCC built about 35,000 dwellings; of these 93.75% were houses with gardens (U.S., yards) and 6.25% in blocks of flats (U.S., apartments). From 1921 to 1937 the proportion in flats steadily grew; new houses fell to 35.2% while flats rose to 64.8%. In Liverpool no flats were built between 1919 and 1931, but the percentage rose by 1936 to 66%. Birmingham began its first 'experimental' block of flats in 1938.

After the second World War there was another revival of housing idealism, and in the country as a whole an admirable start was again made, which included higher standards of internal floor space and design and considerable improvements in fittings. But again, largely owing to the pressure on space (though there were other factors to which we shall refer later) key standards have deteriorated. It is a strange anomaly that a downward trend in standards for new housing should have occurred during a period when there has been a marked rise in the real income of the classes of persons housed.

In England and Wales the percentages of houses and flats built by public authorities in the first 7 years after the second war (1945-51)

were: houses 87·9%, flats 12·1%; and almost all the flats were in large towns. In 1959 the percentages were: houses 59·4%, flats 40·6%. In 1945-51 about 83% of new dwellings had three or more bedrooms; in 1959 about 41·6%. To a small extent this startling decline is due to the later emphasis on dwellings for old people. And perhaps it can be partially explained by the fact that the average household has diminished in size. But in a progressively affluent society one would have expected the rise in purchasing power to offset these changes.

There is no evidence that between 1921-27 and 1945-62 there has been any weakening to the British preference for the self-contained house over the flatted dwelling. During and since the 1939-45 war many social surveys and opinion polls have tested this issue. Enquiries among men and women serving in the war showed a 95 to 98% preference for houses.¹ Very few surveys, in town or country, have shown a preference of less than 90%.

We have little doubt ourselves that in the secret places of his heart almost every youngish British family man cherishes the thought (as a lovely dream like that of winning a £75,000 prize on a football pool) of living in a detached (U.S., free-standing or ranch) house or bungalow. His more realistic hope is that some day he may own a semi-detached (semi-attached) house as a good second-best. Short of this he feels that he and his family could be very happy in a terrace (row) house; but he will seldom be inclined to buy one of this type. If it were truly impracticable to cater for even the most modest of these aspirations, we should have to dismiss them as pathetic. Advocates of new towns hold, and have demonstrated, that it is entirely practicable.

Unfortunately, the idealism of ministers and city administrators, unlike that of the homeseekers able to exercise some personal choice, has not been able to withstand the impact of the insensate trend to urban compression. The phase of resolve to maintain the self-contained family dwelling (shown in the manual of 1919 quoted above) gives place to a phase of temporary acceptance of flatted tenements as a regretted *pis aller*, with which we have to sympathise. The third phase is the claim that multi-storey mass housing is a great aesthetic and social advance. It would seem that inordinately high density, as Pope said of Vice,

‘ . . . is a monster of so frightful mien,
As to be hated, needs but to be seen,
Yet seen too oft, familiar with her face,
We first endure, then pity, then embrace.’

We may add, as an opinion based on personal experience in housing and estate management, and consultation with many others of current experience, that we think that as many as 10% of households in an urban population, and (in large cities where the composition of households is exceptional) even up to 15 or 20 per cent., would be reasonably content to live in and pay economic rents for good flats. But we cannot

¹See Arnold Whittick, *Civic Design and the Home* (London 1943).

believe that a much greater percentage would willingly accept this way of living as a permanency. The current (1960) development plan for London County proposes residential zoning densities for the future that would appear to necessitate that 75 per cent. or more of households in a population of over 3 millions would have to be housed in flats. The planning policies of many other big cities in Britain (and in the U.S.A.) imply a belief that flat-life will be accepted as a norm by millions of their inhabitants. Yet it is the spontaneous outward flow of millions of the more prosperous and ambitious families to suburban situations where the single-family home is obtainable that is the prime cause of the problem of the 'exploding metropolis'.¹ Obviously a part of the answer to this problem is the renewal of the 'downtown' areas of cities in forms that will make them again acceptable places to live in; and this renewal is urgently necessary. But it cannot be done without a substantial reduction of density and a big displacement of population—the part of the answer that is the subject of this book.

THE JOURNEY TO WORK

The wastage of time and earnings in long daily journeys to and from work is a grievous deduction from the benefits of economic advance. By inventive and managerial skills, complemented by the pressure of organised labour, hours of work are gradually shortened and real earnings increased. Concurrently many of the hours thus saved, and much of the income thus gained, are dissipated in lengthening journeys and rising fares. Egregious as it is, this frustration of progress passes with little or no notice; neither the workers' nor employers' organizations have seen the size of towns or the location of workplaces as things relevant to their common or separate interests. The failure to 'connect', in face of this and other aspects of the urban situation, is due to the blind acceptance of the established background, as in some way fate-given and ungovernable, to which we have referred. The town-dweller is born with, or develops, 'urban blinkers', which save him some distractions and also make him easier to drive.

Within the scope of his personal choice the average city-dweller is confronted with a dilemma. Either he and his family must live in close quarters and often graceless surroundings near the centre where they can have quick access to the varied amusements and cultural facilities of town life, or they must forgo these advantages and the working members of the family must suffer a loss of ten to 15 or even 20 hours a week of leisure time in order that they may have a single-family home in a pleasant suburb. By the latter choice the city-dweller cuts himself off from the distinctive down-town advantages, except as things for infrequent resort. The former choice is made by the genuinely urban-minded minority, by those closely tied to down-town occupations, and by the mass of the poor and passive. But the proportion who will sacrifice time

¹William H. Whyte, Jr.: *The Exploding Metropolis* (New York 1958).

and money for the suburban solution is increasing with the advance in real earnings and aspirations.

That in a complex and highly-integrated economy some people must travel longish distances to work need not be contested. Members of the same family may be employed in different places, and there is an inertia or 'anchorage' both of accustomed homes and existing workplaces that makes it impossible for every person to be provided with employment on his doorstep.¹ What is needless and fantastic is that hundreds of thousands of persons should be housed in one situation and travel *en masse* to a remote situation to work. Traffic on the London railways illustrates the discomfort to which this divorce of home and workplace can lead. In London, even in 1938, on some of these railways a majority of passengers had to stand, hanging on to overhead straps, for distances of up to 12 miles—'the limit', according to the evidence to the Barlow Royal Commission of a famous transport expert, 'of the patience of the straphanger'.² A solution suggested by this same expert was that masses of the working population should live in the centre and travel to workplaces in the suburbs, while other masses should live in the suburbs and travel to work in the centre. By this means, he estimated, Greater London's population could be increased from 8½ to 12 millions, every commuter could have a seat at peak hours, and the public transport (U.S., transit) business could balance its revenue budget. Unless this could be achieved, he said, Londoners must for all time be straphangers or the system could never pay its way.³ This evidence was perhaps the peak hour of metropolitan transport idealism, which has since lost its glow, but is by no means dead. After stiff increases in fares London Transport in recent years has paid its way and is even reducing its accumulated deficit. It is a brilliant organization; perhaps better than any other metropolitan system. But straphanging is no longer a peculiarity of peak hours; it has been extended to other periods of the day. The solution for overcrowding now advanced is the provision of additional tube railways, the construction of which is delayed by grave doubts as to whether their cost can be covered by fares.

SHORTAGE OF PLAY-SPACE

The insufficiency of space for outdoor games in great cities is notorious. There are few exceptions to the rule that the larger a town is the less recreation space it provides per head of population within reach of its inhabitants. To engage in outdoor games and sports is a passionate desire of many people in town and country alike; and the National Playing Fields Association, after careful and repeated study, considers that the provision for such recreation in towns should not fall below six acres a thousand persons, with at least another one acre a thousand for

¹K. Liepmann: *The Journey to Work* (London 1944).

²Royal Commission on the Distribution of the Industrial Population. Evidence of London Transport Board. (H.M.S.O. 1940).

³Ib. By 1962 the Londoner has progressed in patience. Many passengers now have to stand (without straps) in train corridors and guards' vans for 15 to 20 miles.

other kinds of parks or open spaces. This is in fact now officially accepted in Britain as the standard to aim at in planning policy.

Some of Britain's moderate-sized towns reach or even excel this open space standard. St. Albans and Canterbury have 10 acres a thousand, Welwyn Garden City 9·33 acres, Torquay 30 acres. In addition the people of these smaller towns have easy access to the surrounding open country.

But Birmingham (population 1961, 1,106,000) had in 1951 only 2 acres of public open space a 1,000, Glasgow (1,055,000) 2·85, Liverpool (747,000) 1·9, Manchester (661,000) 3, Cardiff (256,000) 2·7 and Newcastle (270,000) 4·4, a 1,000. London County (3,195,000) had about 2½ acres a 1,000 of public open space, of which only about a quarter could be used for playing fields. In the Abercrombie-Forshaw plan of 1944 it was proposed to aim at a ration of 4 acres a 1,000 inside the county, and a further 3 acres a 1,000 outside—on the distant fringe of the agglomeration. In later development plans this long-term ambition was reduced to a total of 4 acres a 1,000. But advance towards this is terribly slow; any provision of new open space displaces existing population from the land acquired for it, thereby increasing the housing shortage. Hence in London County only 521 acres were added to public open space between 1951 and 1960, and most of this by the conversion of private open space to public use. The prospects of reaching the target even in 20 years are not bright, unless the population of the county falls considerably.

CONSTRICION OF SPACE FOR SCHOOLS

Educationists in Britain attach great importance to the provision of facilities for games, outdoor exercise, and gardening in connection with schooling; and carefully-worked-out standards were adopted in 1945 for the areas of sites for new schools. Examples of the Ministry of Education's national standards were: for primary schools of 400 pupils, 6 acres; for secondary schools of 450, 17 acres. But owing to the space shortage in large towns these standards have to be severely cut. In London County the permitted areas for new schools are far smaller: each site is considered on its merits. There are very many existing schools without anything like this area. Indeed the total area of primary and secondary schools, for 447,600 pupils, was in 1957 1,450 acres—an average of 1·3 acres for 400 pupils. The shortage of school playing-field space is so acute that no less than 800 acres of the public playing-field space has to be allocated for the use of schools, thus reducing the balance available for general use.

OTHER DISADVANTAGES OF SIZE

It has long been realised that the death-rates and sickness rates in the crowded parts of cities exceed those in the more open suburbs and in rural areas. In Britain and other advanced states the mortality differ-

entials have been greatly reduced with the progress of sanitation and medicine; but it is a matter of common observation that surviving people, especially children, are healthier in open than in crowded surroundings. It also remains true that the birth-rate (and with it the survival rate) is higher in the country and the suburbs than in city centres; but admittedly it is difficult to generalise from this, because the younger families naturally choose, if they can, the more favourable situations. And now that the world population is increasing so rapidly as to cause alarm among thoughtful people there are some who look favourably on concentration in multi-storey apartments in cities as a possible corrective.¹ Even if this were practicable on a sufficiently large scale, we could not regard it as a humane solution of the population problem.

Our species is one of the most adaptable to varied habitats: we can live, sustain production and breed in highly unfavourable and uncongenial environments. But man is not necessarily at his best or happiest in a habitat in which he can, with the aid of his science, manage to survive. In a congested city many people find that their sense of well-being is depreciated by unfresh air, fumes from motor exhausts, swarming sidewalks, traffic noises and vibrations, packed restaurants and other places of resort. On occasion the bright lights of shop-windows and neon signs, the bustle and clamorous variety of a town can be stimulating, amusing and pleasurable to many people. 'The hum of human cities' is not a 'torture' to all as it was to Byron. But for most there is a point at which crowds seem oppressive, brightness becomes painful glare, and the sense of fellow-feeling in a community passes over into that of isolation in an anonymous mob. Even the super-urbanized types who most luxuriate in the whirl of the town want to be able to get out of it as well as into it. Very few want to have their personal dwellings in the midst of its fascinating refulgence and stridency. At best these provide an episodic indulgence, like taking a Turkish bath. And not everybody wants a Turkish bath even occasionally.

On the aesthetic attraction and repulsion of large cities tastes differ so widely that it is strange that some writers seem to assume there is unanimity. (We deal later with 'amenity' as a subjective phenomenon.) Obviously as many types of pleasingness are to be found in towns as in human persons. Some types of urban beauty are associated with compactness or partial enclosure, others with spaciousness; some derive from grandeur, others from simplicity; some depend on architectural harmony, others on diversity. Harmony can shade over into monotony, variety into displeasing chaos. The functional adequacy of a town does not now in the least necessitate intense compression; the degree of closeness it has to have depends on the means of communication available and, as we have said, on the size of its population. Some spacious and lavishly planted towns are functionally efficient, sociable, and charming

¹See for a recent example the address by Richard L. Meier at the 1960 Congress of the American Society of Planning Officials in Miami. (*Planning 1960*, ASPÖ, USA, 1961.)

in appearance. Some very compact towns are charming in appearance and perhaps sociable, but far from functionally efficient; successful traders leave their rooms over shops in narrow streets for villas in the outskirts, and the upper floors of the shops become stock-rooms or dwellings for the under-privileged.

That the consciousness of having in some sense a share in the life of a place, of 'belonging', is diminished in a large city as compared with a small town or village is generally agreed, and considered by many observers to lower the quality of the personal and social life. Pockets where there is a strong feeling of neighbourliness do exist in crowded cities, in slums as well as in pleasant quarters. They are however exceptional. The residential mobility characteristic of a prospering and changing society tends everywhere to reduce the 'community' sense, and there are many people who doubt if the loss matters; some free spirits even welcome it. But man is a social as well as a family animal, needing both the support and the criticism of neighbours, and the atomization and isolation characteristic of very large cities must be accounted one of their drawbacks.

The military danger of urban concentration must at least be mentioned. In the two world wars the losses of life and property per bomb discharged were far greater in large and crowded towns than in smaller and more open towns. But some people think that in an atomic war devastation would be so immediate and complete that the distribution of the population can make little difference; and it is true that while the destructive power of H.E. and fire bombs could be measured in acres, that of nuclear weapons extends to square miles. Nevertheless Britain maintains a Civil Defence organization, which implies that survival is regarded as conceivable. And careful thought is given to the spacing out of defence installations. Marginal as the possible reduction of danger to persons and production by a less concentrated massing may be, it is a factor that makes for dispersal. And, as it happens, it is one that marches with the social and economic considerations in national planning policy.

Chapter III

SOME DATA ON TOWN GROWTH

‘If that’s what they like, we can do that!’

—*Music-hall song of the Edwardian period*

EVERYBODY knows that in recent centuries there has been a huge and accelerating increase in urban populations, especially in industrialised countries. A massive parade of figures is not really required to demonstrate this—though statistics, like scientific phraseology, are often useful in making simple observations plain to the highest intelligence. What is not so universally realized is that the increase of population has not distributed itself more or less evenly in towns of average size, nor added roughly equal percentages to towns of different sizes, but has tended to gravitate disproportionately towards centres already very large. We submit a moderate ration of statistics to illustrate this general trend.

After the decline of the Roman Empire great cities almost disappeared in Europe for many centuries. Rome itself fell from over a million in 150 A.D. to 17,000 in the ninth century, and very few other cities retained populations in excess of 100,000. About the beginning of the eighteenth century London, which had emerged as a contender with Paris for the title of Largest City of the World, first established a decided lead, though even then its total population, including its suburbs, did not much exceed 500,000. There were in England many other prosperous trading and industrial towns, but few of these reached even 50,000.

THE GROWTH OF LONDON

London, a governmental as well as trading centre, was not only the largest town but had long been the fastest growing. Already in the sixteenth and seventeenth centuries its growth had occasioned alarm as well as pride. The flood of artisans and labourers who poured in from the country to serve the ruling and wealthy classes and to pick up crumbs for themselves depreciated the town’s character and led to the well-known series of ineffective attempts to restrict its outward expansion, from the reign of Elizabeth I to that of Charles II. Neither the Plague of 1665 nor the Great Fire of 1666 had any more permanent effect. These calamities caused much displacement and important changes in the direction of London’s growth; but the loss of population by death was quickly overtaken by continued in-migration.

Population grew apace, and by 1801 the city and the scattered towns

and villages in the surrounding area of about 693 square miles and about 15 miles radius, later known as Greater London, had 1,154,644 inhabitants.¹ By 1939 the population of this same 693 square miles had multiplied $7\frac{1}{2}$ times to 8,728,000. In the same 138 years the population of the rest of Great Britain increased from 9,386,300 to 37,739,000—a multiplication by 4—or just over half that of London.

This astonishing difference in the rates of growth was not uniform throughout the period. From 1801 to 1841 London gained on the rest of the island even more rapidly, but the rest roughly kept pace from 1841 up to the first world war. In the inter-war years (1921–1939) the impetus to London was resumed: the conurbation grew by 14·32 per cent (1,240,000) while the rest grew by only 6·3 per cent (2,418,000).

These figures do not tell the whole story. Between 1921 and 1939 there was a big outward movement from the central parts of London to the outer ring in search of acceptable homes. London County lost on balance 600,000 persons through this inter-war exodus, while many people came into the conurbation from elsewhere; so that the population of the outer ring of Greater London increased by over 1,800,000. There was also a considerable increase in the region immediately surrounding the actual conurbation. At the same time employment inside it correspondingly expanded. Mainly it was the development of public transport that made possible this centralization of workplaces and outward expansion of residential dormitories. Londoners became a race of long-distance commuters and reluctant (yet remarkably tolerant) strap-hangers. For most of these, undoubtedly, the compensation of a decent suburban house with a garden outweighed the discomforts of daily travel. Their 'urban blinkers' hid from them the possibility that there could be a less ridiculous way of grouping their homes and workplaces.

Even more striking than the figures for built-up Greater London in that period are those for London and the Home Counties (Bedford, Buckingham, Essex, Hertford, Kent, Middlesex and Surrey). The population of this region grew between 1801 and 1937 from 1,892,000 to 11,843,000—a multiplication by $5\frac{1}{2}$. In the rest of Great Britain the rise was from 8,609,000 to 32,165,000—a multiplication by $3\frac{3}{4}$. And in the 16 years from 1921 to 1937 London and the Home Counties had an absolute increase in excess of that of the rest of the country—1,803,000 against 1,437,000. In 1801 this region had 18 per cent of the island's population. In 1961 it had over 25 per cent.

CHANGES IN OTHER REGIONS

Significantly large relative rates of increase occurred in the other six great conurbations during the period for which comparative figures are available. Between 1911 and 1939 the West Midlands conurbation, centred on Birmingham, increased its population by 445,000 or 27·2

¹Evidence of Registrar-General to Barlow Royal Commission 1938 (HMSO 1940). Our comparative figures for the London conurbation and the rest of G.B. are derived from this evidence and later official estimates. The word 'conurbation' as used in this chapter means the continuously-built-up area with no intervening green-belt spaces.

per cent. The rest of Great Britain, including the other conurbations, increased by 13·8 per cent; and, excluding the conurbations, by 12·29 per cent.

The interest of these pre-1939 statistics is that they show the trend of population movement in Britain before any conception of its control by national policy had emerged.

Since 1939 the total population of most of the seven conurbations, which then had 40 per cent of that of Great Britain, has been almost static. But employment in them has continued to grow, and the flow of population to the regions of which they are the centres has been maintained.

Conversely there has been a gradual decline of population in some of the northern counties of England and in parts of Wales, only partially checked so far by governmental measures to encourage the development of more industry in certain highly-urbanized regions where the fall of employment is greater than the loss of population.

These changes have resulted in a grossly unbalanced distribution of Britain's town population. That the vast majority of people on the island must depend on urban occupations is not to be contested. For well-known reasons the number who can be sustained by agriculture continuously declines. In 1961 less than $4\frac{1}{2}$ per cent of the working population were engaged in agriculture and forestry. Assuming a roughly equal number directly serving the agricultural population, the proportion dependent on rural pursuits is of the order of 9 per cent. Over 90 per cent of the British people, working and retired, are sustained by urban activities.

Yet just over 20 per cent reside in rural and landward districts. A large number of these are town-supported people who live in the semi-suburban fringes, which are areas of population increase. In some remoter rural districts, within reach of partially industrialised country towns, the population is fairly static, being reinforced by persons who work in these towns or have retired from the big cities. But despite the prosperity of agriculture in recent years, and the welcome rise of earnings of farmers and farm workers, the spread of modern services and amenities to the countryside is still in many places held back by the sparsity of population. Howard's 'country magnet' remains undercharged. The downward spiral of rural affairs has been lessened in steepness and stagnation is perhaps now relative rather than absolute, but there is still a selective drawing-off of able and ambitious young people to the bigger cities.

MILLION CITIES: A WORLD PROBLEM

Not at all as a national boast, but simply as a fact of history, we recall that Great Britain, in pioneering the Industrial Revolution, led the way into the swollen and compressed type of urban development that embarrasses all industrialised countries today. Stupendous advances in productive capacity and standards of real purchasing power have accom-

panied the flow of rapidly-increasing populations into great towns. Other nations following what has happened in Britain, and Britain observing what has happened in other nations, have assumed that material progress is indissoluble from urban concentration. They are reciprocally encouraged in the same negligence of control: a phenomenon so universal, it seems, must be all right, or at any rate inevitable. And just as individual towns have competed and claimed glory in size and speed of growth, nations emulate each other in the possession of numbers of million cities.

Nations, no less than persons, want to keep up with the Joneses, and the Joneses of the minute are sometimes the votaries of fashions that give them no real subjective pleasure apart from that of display, and may, like Victorian tight-lacing, be extremely discomfoting. The fashion for the continuously built-up million city, or multi-million metropolis, with its layered apartment dwellings, its paucity of recreation space, divorce of workplaces from homes and of homes from green surroundings, and its mounting congestion of movement, is about as pointless and uncomfortable a fashion as humanity has ever embraced.

Yet all over the world the massing of human beings in ever-larger urban agglomerations continues and gathers speed. In 1950 there were about 80 'metropolitan areas' with over one million inhabitants. In 1960 there were 112, holding 285 millions, nearly 10 per cent of the world population. (The United States had 23 of these, Great Britain six.) Another 305 millions were living in metropolitan areas of between 100,000 and a million. Of the total world population, then 2,962 millions, 1,002 millions (33.9 per cent) were urban, and 1,960 millions rural (66.1 per cent).¹

Definitions of 'metropolitan area' are not in all countries precisely the same as that of 'conurbation' in the British census reports, where it means a continuously-built-up urban agglomeration (on certain standards of density) without intervening rural land. But on any reckoning 'London' is not now the largest (most populous) metropolitan area. In 1960 or thereabouts New York topped the list with close on 15 millions; Tokyo-Yokohama was next with nearly 11 millions; then came London with 8½ millions; Moscow 7½ millions; Shanghai 7 millions; Chicago 7 millions; Los Angeles 6¾ millions; Paris 6¾ millions; Osaka-Kobe 6½ millions; Buenos Aires 6 millions; Calcutta 5.9 millions; Bombay 5¾ millions; and Essen-Dortmund-Duisburg (Inner Ruhr) 5½ millions. In all there were 42 agglomerations of over 2 millions, and a further 78 of over 900,000. Almost without exception they are still growing.

Planned redevelopment of the older cities is beginning or under consideration in many countries, and in this process the overgrown agglomerations ought to be and could be reduced in density and population, as is happening to a limited extent in Great Britain. In the 10 years 1950-60 the population in British cities of 100,000 and over still increased a little—by 1.13 per cent. In the United States it increased by

¹Homer Hoyt, *Urban Land Institute Technical Bulletin* 43, (Washington, DC, 1962).

26.4 per cent, in the USSR by 73.1 per cent, in Japan by 79.4 per cent, and in China by 98.5 per cent.¹ These countries have as yet hardly begun to take a grip on adventitious trends that must be injuring their people's living conditions to a devastating degree and needlessly hampering their industrial and commercial efficiency. Their statisticians now accurately calculate the growth and distribution of their populations and ably project them into the future; but they seem in general to accept the pattern of growth as inevitable. We see no reason to accept it.

Correcting the existing maldistribution will be a colossal and daunting task. A far greater scope for planning however lies in the considered placing of the additional people expected to arrive 'out of the cradle endlessly rocking'. The latest estimates of the UN Population Branch are that by the year 2,000 the world population, now just over 3,600 millions, will more than double; the higher estimate is that it will rise to 6,900 millions. We do not here discuss whether such an abundance of life is desirable, or the means by which the anticipated numbers can be fed—a problem on which expert opinions widely differ, but which does not appear to be insoluble.² These millions of extra human beings must, we assume, be regarded as on their way in. If the existing trend to great cities continues the estimate is that by the year 2,000 the population of the million-cities will rise from 285 to 1,285 millions, and of cities of 100,000 and over from 590 to 2,644 millions, or 42 per cent of the world total.³

That the nations of the world, led by those most advanced in urbanization, must preclude this terrifying prospect by developing methods of controlling the size and distribution of cities seems to us imperative. The experiments made by Great Britain in this direction, small enough in relation to its own urban problems, may seem trivial in relation to those of the world at large. But they are significant, because they point the way.

It will be historically a sort of *amende honorable* to the world if Britain, the classic land of industrialism and its urban consequences, proves through a policy of dispersal and new-town building to be the pioneer of a more humane, gracious and efficient pattern of town and country arrangement.

¹Homer Hoyt: *op. cit.*

²See Colin Clark: *Journal of Royal Statistical Society*, 1962.

³Homer Hoyt: *op. cit.* See also Chapter XI.

Chapter IV

THE EXPERIMENTAL NEW TOWNS

'Behold now, this city is near to flee unto, and it is a little one: O let me escape thither, (is it not a little one?) and my soul shall live.'

—*Genesis xix, 20: (Lot's appeal)*

HOWARD'S book of 1898 had as a practical outcome, surprisingly soon, the foundation in 1903-4 of the First Garden City, at Letchworth, Hertfordshire, 35 miles north of London. The book had aroused much interest and press comment, the reactions ranging from wild enthusiasm to lofty scorn, scepticism prevailing. Even the news-sheet of the constructively revolutionary Fabian Society giggled at the naivety of a man who wanted new towns built in a country urbanised by the Romans 2,000 years earlier.

The disbelievers would certainly not have been converted by the handwritten minutes (still preserved) of the tiny group of men who, with Howard, founded in 1899 the Garden City Association (now the Town and Country Planning Association). These men were neither well-known nor wealthy, but they were united in a conviction that what was generally regarded as a simple-minded idealistic scheme was practicable and could be carried out by private effort. They fixed the subscription to the Association at one shilling a year, held meetings under the auspices of all sorts of bodies all over the country at which Howard and other members lectured, and quickly recruited an appreciable following—though neither then nor at any time since did the Association become anything like a mass movement.

Through the energy and concentration of this small but devoted membership, sufficient interest was aroused to encourage the Association to hold, in 1901-2, two large conferences, at which the attendance included delegates of hundreds of local authorities. It is of historic significance that these conferences were held at Bournville in the West Midlands, and Port Sunlight on Merseyside. These new-type industrial villages, which pioneered the planned and planted layout of good family homes with gardens in close relationship to healthy and efficient modern factories, were then arousing hopeful interest, and were valuable signposts to the more comprehensive form of urban development envisaged by Howard and his followers. The choice of venue is also a reminder of the important part played by a few imaginative industrialists, among them George Cadbury and William Henry Lever (later Lord Leverhulme), the founders of these two villages, in getting the garden city idea considered as a practicable proposition.

Like the writings of many other far-sighted reformers, Howard's *To-morrow*, essentially sound and practical as it was in its analysis and proposals, was tinged by a rosy hope of a better society, and a belief in the basic goodness of mankind, confession of which is distasteful to statesmen, business-men and many responsible persons, who fear that any suspicion that they entertain such sentiments may injure their reputation for toughness in this competitive world. And because the book was written in a simple and persuasive style, without the definitions, qualifications, and reservations customary in technical and scientific works, most professors and students of economics and political science disregarded it as just another idealistic Utopia. Even, however, if its proposals had been expressed in cold-blooded terms by an industrialist respected for his success or by a sociologist of academic repute, instead of by an unknown shorthand writer, the notion of building a completely new town by private enterprise in modern England would have seemed to most realistic people in 1898-1903 a romantic, fantastic dream.

For indeed the initiation of the Letchworth experiment was an almost incredibly daring venture. There was no precedent for it apart from a series of dismal failures in small-scale community founding. It could never have happened but for Howard's intense conviction and extraordinary determination, and the effect that his sincerity and talent for persuasion had on men of standing and experience in practical affairs. It could never have happened if Howard had not had the good fortune to enlist the support of a particular group, capable and courageous in business and conscious of social responsibility.

PROGRAMME OF THE LETCHWORTH COMPANY

In the very effective propaganda of the Garden City Association, and in its promotion of the Letchworth scheme, a leading part was taken by a Chancery barrister, (Sir) Ralph Neville, QC (later Mr. Justice Neville), who became Chairman of the Association and also of the company it formed in 1903 to build the town—First Garden City Limited. Neville, and the industrialists (mostly like himself Liberals in politics) who joined him and Howard on the board of this company, along with its first manager (Dr.) Thomas Adams, extracted the essence from Howard's programme and propounded it in terms acceptable to possible investors without denuding it of its essentially public-spirited aims. The original prospectus of First Garden City Ltd. indeed, should be regarded as the definitive statement of the actual aims of the garden city movement rather than Howard's book, which was of immense inspirational importance, but was never treated as a Bible or an Athanasian Creed. The main objects of the company were stated as follows:

'To develop an estate of about 3,800 acres, between Hitchin and Baldock, on the lines suggested by Mr. Ebenezer Howard in his book *Garden Cities of To-Morrow*, with any necessary modifications. It is believed the result will be not only to promote a great social improve-

ment, but to provide for those who can afford to wait an investment that will prove a sound one.

'The *root* idea of Mr. Howard's book is to deal at once with the two vital questions of *overcrowding* in our towns and the *depopulation* of our rural districts, and to thereby reduce the congestion of population in the great towns, or at least arrest its progress.

'The difficulty of dealing with the housing question in our overcrowded industrial centres becomes increasingly apparent with every fresh attempt at amendment. The expense is enormous, while improvement in any one direction frequently increases the evil in another. The only satisfactory way out of the difficulty is to start afresh and establish a new town to which those manufacturers whose businesses admit of such removal may go.'

There followed provisions for the five per cent limit on dividends and for the application of any surplus increments of profits and land values for the benefit of the inhabitants of the town. The prospectus then alluded to the planning possibilities inherent in the scheme:

'The control of the site of a town from its commencement obviously offers an unparalleled opportunity for the provision of open spaces and allotments while land is cheap, and also for the supply of power, light and water on advantageous terms.'

It added:

'Sound physical condition is surely the foundation of all human development, and the directors submit to the public a scheme for securing it in a particular instance which they believe contains all the elements of success, and which, if carried to a successful issue, will lead to that redistribution of the people upon the land, in which alone, as they believe, is to be found a solution of the problem—How to maintain and increase industrial efficiency without impairing the national physique.'

We do not in this book describe in detail the development of Letchworth, well covered in other books.¹ Certain aspects of it, however, relevant to the general subject of new towns, call for mention.

Though the essential principles of the first garden city were the same as those of the later new towns, the circumstances of its foundation were very different. The idea was imaginative and had a popular appeal, but as a private enterprise venture it was not unnaturally regarded by most hard-headed business-men as speculative in the highest degree. The odds were heavily loaded against an investor in the company's shares: on the one hand a serious risk of the loss of his capital, and on the other a prospect, after some years, of an annual return of five per cent at the maximum. (The interest on Consols at the time was $2\frac{1}{2}$ per cent.) The company's prospectus was perfectly frank about the proposition. None but persons willing to accept the chance of loss and the limit of gain in the hope of social benefit could be expected to invest on such terms. And in the event the company, whose authorised capital was £300,000, went to allotment on £40,000, subscribed in the main by its

¹See C. B. Purdom: *The Garden City* (1913), and *The Building of Satellite Towns* (1949).

own public-spirited directors. At the end of the first year (1904) the total share capital subscribed was only £100,000. The company had already committed itself to the purchase of the site for £160,000 (£42 an acre), so that it had at the very outset to raise much money by means of mortgages and debentures, on which interest had to be paid before new revenues could be created.

The company being thus under-capitalized from the start, development was necessarily slow. The site was wholly rural: roads, sewers, water works, gas and electricity works, and all the supply mains for these services, had to be provided *de novo*. The company had no money to finance houses, factories or shops: it had to induce industrialists, retailers and residents to come in and build their own premises on leasehold sites—without any real assurance that a town would in fact be successfully created, or, even if it were, how long it would take. In the circumstances it is amazing that lessees willing to venture their own capital in building on the estate could be attracted at all.

Anticipating a later stage in our story, we may compare the situation of First Garden City Ltd. with that of a new town development corporation under the New Towns Act of 1946, with its governmental sponsorship, its millions of Treasury money available for estate works, housing and other buildings, and the precedents of Letchworth and Welwyn to show that new towns could be created and become satisfactory places to live and work in. At Harlow New Town, for example, in the first ten years a capital of £35 million was invested by the development corporation (nearly £20m. in housing), 40,000 people had been housed, and 75 factory firms had been attracted. The Letchworth Company in its first ten years had expended £400,000 and drawn in a population of 8,000. In 1903–13 there was in England hardly any public housing; at Letchworth the workers' dwellings had to be provided in the main by public utility societies, for which the risk-taking capital had to be subscribed by philanthropic investors with interest limited to 4% per annum. Some houses were built by owner-occupiers, but Letchworth was too far from London or any other centre to attract many commuters. In the main the early residents had to find employment locally in the industries and businesses courageous enough to choose a place of such speculative promise. Among the early settlers there was also a sprinkling of families of independent means and of artists and other self-employed persons. These groups, with the few shop-keepers and builders, and the staff and workers of the estate company, made up the pioneer population.

SOCIAL ATMOSPHERE OF LETCHWORTH

What is remarkable is the social and mental energy this small community in its earliest days developed. There was no theatre or cinema or public house; no church or chapel building; only two or three small and weak retail shops (the future civic centre was an empty windblown prairie); radio and television were undreamed of; the one public meeting place (apart from a county school) was a small hall (paid for by

private subscriptions). Equipped playing fields came very slowly. Yet an extremely vigorous and enjoyable community life sprang into being from very early days. The absence of commercial entertainment threw people back on their own resources, and there was no lack of spontaneous leadership in founding and running a wide variety of societies and clubs—for music, drama, politics, religion, sports, rambling, dancing, gardening, natural history, arts and crafts, and serious study. Meetings and performances took place in any makeshift building available, such as an old farm barn, and in the living-rooms of private houses. Everybody knew everybody, and met nearly everybody in some activity or other, and class and income barriers were at a minimum. A friendly democratic atmosphere and a prevailing tolerance of different views and degrees of formality in dress and manners therefore developed, and in later days, when social stratification and more standardized conventions began to invade, older residents looked back on the pioneering period as a golden age.

For people migrating from inner London to the first garden city half a century ago the change of physical and social environment was revolutionary to a degree unimaginable by those who settle in a new town today. To a typical city dweller who had not tried it, life in Letchworth must have seemed denuded of all amenities except fresh air, horizon light, and a cottage with a garden—seductive things to him, but surely insufficient compensation for the loss of the bright lights, the swarming vitality, and the kaleidoscopic attractions and opportunities of the metropolis. And such a man (we describe an actual experience), when to take up a job he moved to the garden city, was at first badly shaken to discover that the anonymity to which he had been accustomed had disappeared. He found himself in a society in which as a personality he was known in the round. Where he lived, where he worked, his political or religious views, his family connections, and (except within his private dwelling) his leisure pursuits, were more or less common knowledge. In the big cities only fragmented aspects of his goings-on were known, to different sets of associates; as a complete being he didn't exist for anybody but himself. This had given him a sense of complete personal freedom, which he had come to value highly. But now he became a personality in a society; for the freedom of a disregarded cipher he had to accept the responsibility of a citizen; what he did or said had influence in proportion to his mental or moral repute; for the first time in his life, he 'counted'—a very uncomfortable feeling for a native Londoner.

Of course a person of negative or easily intimidable character is nearly as much of a cipher in a small new community as in a big old one. There were plenty of this usefully accommodating sort in Letchworth in the early days. (They are by no means to be despised; if not the salt of the earth, they are its silicon base.) But the proportion of colourful personalities was above the national average. This added to the interest of life. As in the later new towns, the great majority of settlers in Letchworth went there just to get a job with the special advantage of a

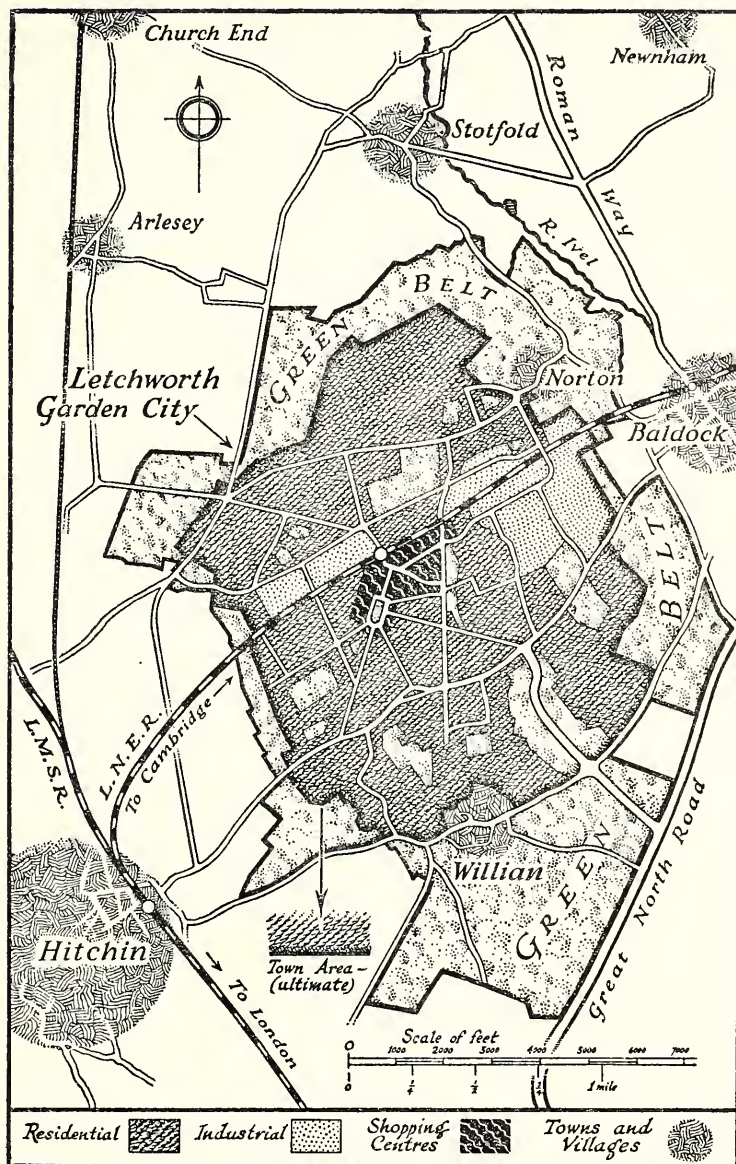
nice home nearby. But an appreciable minority were attracted by the principles that were to be tested—the pre-planning, the quasi-public ownership of the site with its prospect of a community share in rising land values, the return to a closer relationship of urban and rural activities, and so on. Among these were a sprinkling of people holding views then somewhat ahead of the time, though since generally or very widely accepted: on votes for women, democratic socialism, and vegetarianism, for instance. But there were a few who even in the present less conventional (or is it just differently conventional?) period would be looked on as ‘cranks’: extreme Simple-Lifers and dress reformers, for example. Bare ankles and sandals are not yet commonplaces in Piccadilly, though beards and hatlessness and soft collars now are. In the 1900’s all these were equally subjects of public ridicule. The popular press, which never troubled to understand the town-planning, housing and land-development innovations in the garden city scheme, seized on these visible eccentricities of a tiny minority, and for years made Letchworth a national figure of fun. Moral for reformers: if you have a bright new idea, and want to get it accepted, take care to be dull and conformist in every other aspect of your existence!

No new town today, wherever situated, can be so insulated from commercial and professional entertainment or the prevailing mass-culture as Letchworth at first was. As we shall see, the development of many forms of communication have altered the position entirely. There may be losses as well as gains in the change. A ‘do-it-yourself’ community, with its amateur activities in the arts and sport, adds to the pleasures of spectatorship those of creation and participation. These enhance the understanding and appreciation of professional work if that is also accessible.

The early life of Letchworth was for many, probably most of its citizens, immensely stimulating and enjoyable, and elicited much originality and in some aspects quite high standards. Later phases do not, we think, support a claim for Letchworth to any permanent superiority or distinction as a community. No town or nation anywhere has yet found the formula for high cultural standards both in participation and reception—amateur and professional. Good health and general popular contentment with surroundings and ways of life, however, are much, and these the first garden city can certainly claim. It is the first predominantly manufacturing and all-classes town of which this can be said.

LEITCHWORTH—THE PLAN

The town plan, for which Raymond Unwin and his partner, Barry Parker, were responsible, is simple and straightforward, and of the informal type with which their names are identified—a radical departure from the rigid or geometrical forms of most earlier plans. Fundamentally the main road scheme is radial, with intersecting roads at such distances as permitted ‘super-blocks’ of fair size having a wide diversity of layout in closes and cul-de-sacs, while at the same time avoiding sharp corners



Drawing reproduced from *Garden Cities of Tomorrow* (Faber and Faber 1946)

PLAN OF LETCHWORTH

FIG. I

or inconvenient shapes of single plots. Cross-roads were not deliberately avoided, as they are in later practice, by staggered entries of minor into major roads; but corners were all kept open so that danger at junctions was minimized. Carriageways were at first rather narrow, for reasons of economy in capital cost, and often were unkerbed or had temporary kerbs of wood. Footpaths were similarly narrow, and sometimes omitted. But provision was wisely made for later widening by a general use of grass verges; no through road was less than 40 feet wide between the frontages of plots. Thus, though Letchworth was built 'on a shoestring', its planning looked ahead, and later widenings of carriageways and footpaths have not necessitated cutting into the building plots.

Great attention was paid to landscaping and planting. Flowering and foliage trees and shrubs were introduced in an unprecedented variety of species and arrangements, and all over the town there are decorative green spaces of an infinite variety of shape and size. The positioning of roads and buildings was influenced by an almost religious care for the retention of existing fine trees or attractive spinneys. Only in the ceremonial centres of great capitals and the parades of holiday resorts had planting and landscaping on this lavish scale and with this diversity been practised before. It was a new thing for an industrial town. And the example has had enormous influence all over the world.

Letchworth, originating in a reaction against the crowded conditions in great cities, set definite limits on housing density. Zones of different maximum densities were allocated, as in many municipal ordinances under the system of planning control of new development then emerging in a number of European states. There is an element of prestige, of class distinction—one might say, of snobbery—in the prescription of zones of progressively lower density for fewer people as you go higher up the income scale; and the Letchworth company, which planned for a 'balanced' population, could no more disregard this than any other developer. But Raymond Unwin was particularly concerned to set a standard of absolute maximum density for the lowest-income families. He was of course aware of the maximum of seven houses an acre (including service roads) prevailing in the first parts of Bournville. This must have seemed to him needlessly or impracticably low. Under his advice Letchworth adopted the maximum of 10 houses an acre including access roads, and 12 an acre without roads; but this included the smaller public greens in the local layout, and a modicum of space behind the house gardens for allotments and children's playgrounds. Unwin was an extremely able and resourceful planner, who knew exactly how far the wastage of road space and frontage could be reduced by ingenious layout; but he was (unlike some later planners) equally clear about the importance for the amenities of occupiers of certain key dimensions inside and outside dwellings, and extremely sensitive to popular likings. After very careful study and experiment he decided on a series of desirable minimum component dimensions: a light angle of 15°, just permitting sun to reach living rooms in mid-winter (in the latitude of S.E.

England) over the tops of 2-storey terrace houses; a distance between rows of windows of 70 feet; a set-back of house windows of 20 or 25 feet from public roads or footways; and so on. All such standards are in a sense arbitrary: why 70 feet for example? why not 69 feet? Therefore all can cheerfully be cut, and if the cuts are made gradually they may be little noticed. The Letchworth density maximum has been assailed; and under the changed conditions of today it can be slightly revised upward. But it is no argument against it that it was 'arbitrary', or based on a series of definite minimum component dimensions.

The standards of floor-space in the Letchworth regulations were, by those of our more affluent age, low. To keep rents within the capacity of unskilled workers—about 5s. a week—cottages had to be built for as little as £150 each. In the smallest three-bedroom terrace houses, baths had to be placed in sculleries, room-heating appliances made to serve for cooking and hot water, and other fittings were few. But they were skilfully designed, and were a great advance on the by-law houses in the old cities.

ARCHITECTURAL CHARACTER OF LETCHWORTH

Architecturally the early Letchworth housing schemes and individual houses attained, and exhibit today, considerable charm. Their planning, grouping, landscaping and external design have had vast influence on development throughout the world. And it was through the same school of planners' admirable later work at Hampstead Garden Suburb, where Unwin and Parker had for a longer period full control, that the types of building and layout evolved at Letchworth became so widely diffused—unfortunately mostly in 'garden suburbs' rather than in garden cities or new towns.

The architecture of Letchworth in some of its later stages cannot be said to be equally distinguished. Much of it is quietly and modestly good, but in general it is not much superior in aesthetic quality to the mass of new development in England of its time. The main reason for this is that the company felt itself compelled for many years, in order to dispose of building sites, to give way to the prevailing tastes of owner-occupiers and speculative builders, and the often clashing tastes of clients' architects. In the company's leases there were strong covenants subjecting all exterior design to the approval of the town architect, and it is arguable that the control of design was weaker than it need have been; but that there were real difficulties in applying it must be admitted. Moreover it should not be forgotten that the aesthetic canons of trained architects are not identical with those of the public at large.

Letchworth discovered that the majority of home-seekers are not acutely architecture-conscious or desirous of visual harmony; their taste is rather for variety and as much as possible of individuality, especially in dwellings. Much more important to them than external appearance is internal accommodation and comfort, privacy from the passer-by in the road, and adequacy in garden plots. But there is a popular appreci-

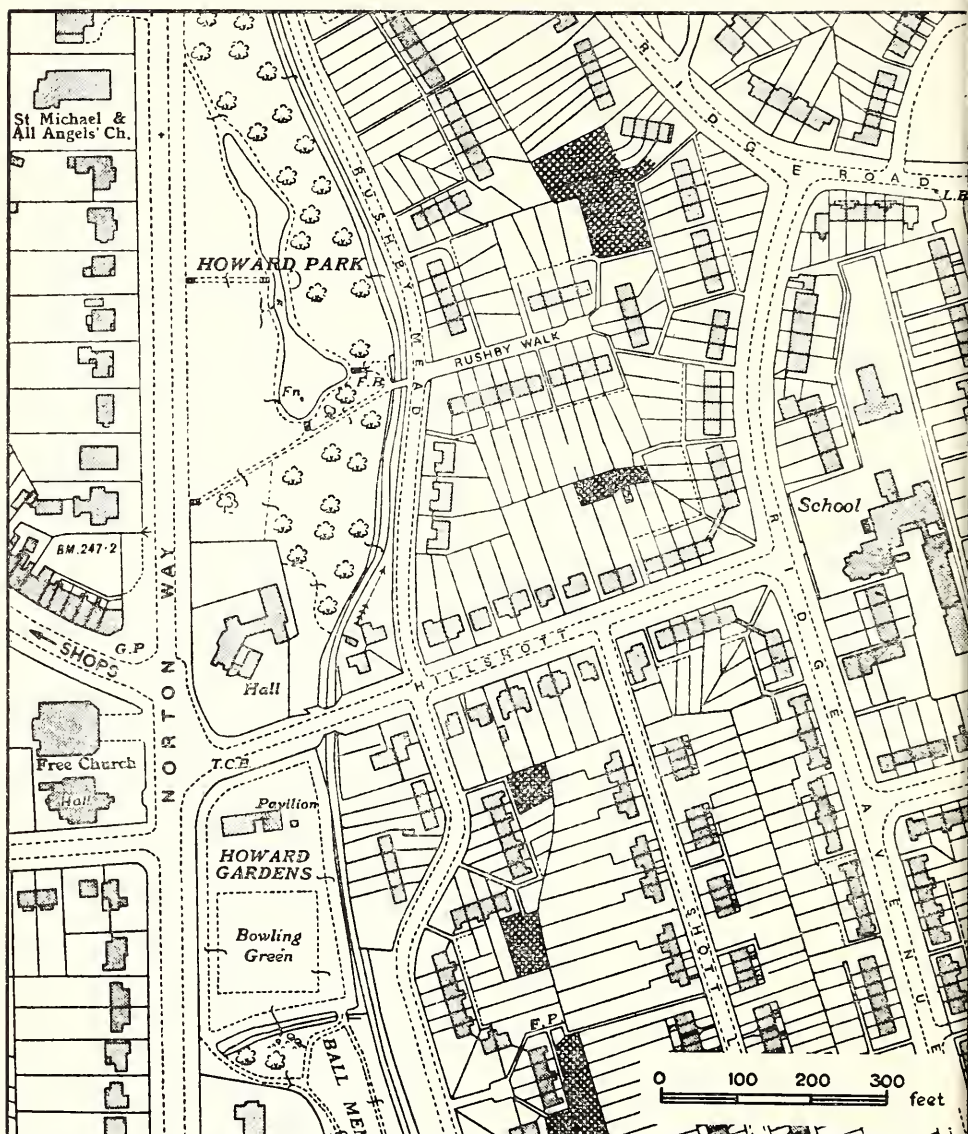


FIG. 2—Part of one of the earliest residential sections of First Garden City (Letchworth), about 1904–06. Low-rent housing in terraces of 4 to 6, at about 10 houses an acre including access roads and small internal open spaces. Detached houses and pairs on larger plots. Pedestrian access paths connecting backs of houses and open spaces proved unpopular and some were later merged in gardens. Those that remain are shown on plan (1962). The layout was influenced by the position of large trees on the site; but these and the subsequent planting are not shown.



(a) Town centre and part of south-east residential district; agricultural belt in distance.

Plate 1. Letchworth.

(b) Early residential development, mainly low-rent terrace housing at about 10 houses an acre. Primary school in centre. Factory zone in distance.





Plate 2.
Letchworth.

(a) Leys Avenue. One of the earliest groups of shops
(about 1905).



(b) Group of three houses in Norton
Way (about 1905). The middle
house was occupied by Ebenezer
Howard. Architects: Barry
Parker and Raymond Unwin.

(c) Gernon Road. Terrace of six
houses for renting. Architects:
R. Bennett and W. Bidwell (about
1905).





Plate 3.
Letchworth.

(a) An early residence for an owner-occupier. Architects:
Barry Parker and Raymond Unwin.



(b) Sollershott. Group of houses with
open front gardens (about 1910).
Architect: C. M. Crickmer.

(c) Atypical cul-de-sac with low-rent
terrace housing (about 1908).



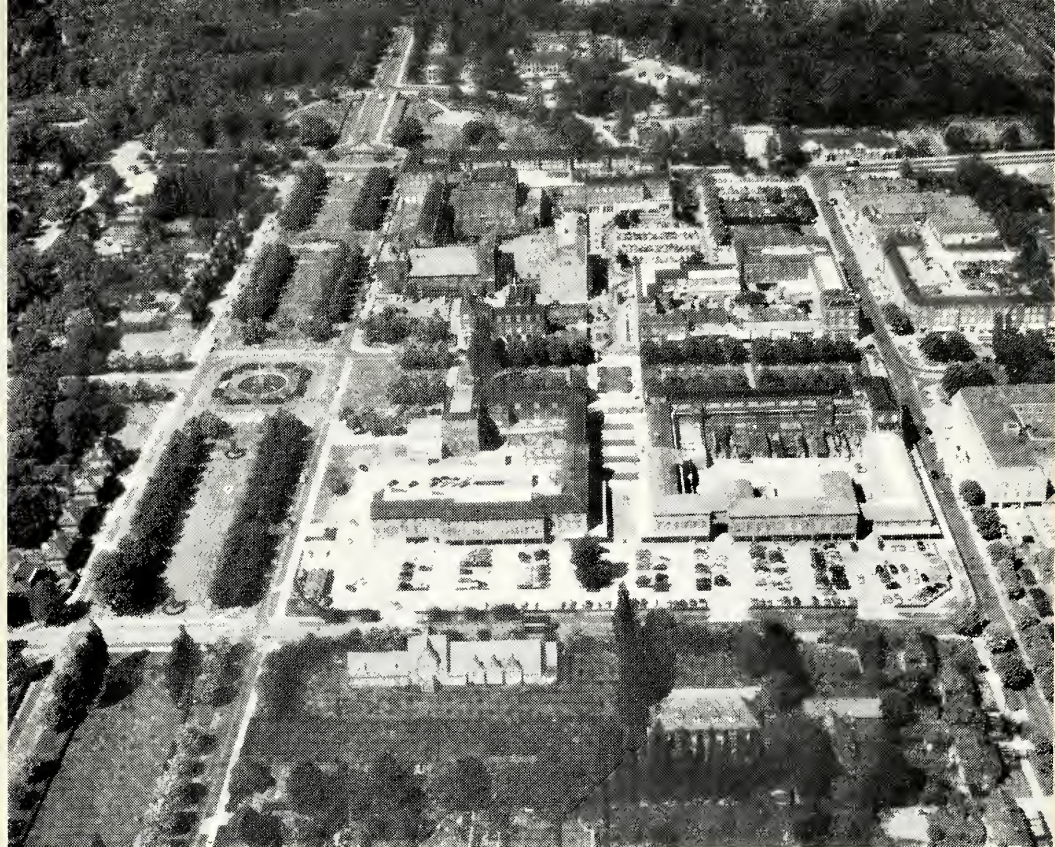


(a) Rushby Mead. Terrace houses built by a housing society for rental (about 1908).

Plate 4. Letchworth.

(b) Rushby Walk. Garden view of housing society cottages.





(a) Town Centre, looking north; Parkway on left, leading to The Campus. Latest (pedestrian) part of shopping centre in middle foreground. Architects: Louis de Soissons and Partners.

Plate 5. Welwyn Garden City.

(b) Welwyn Department Store (1939). Architects: Louis de Soissons and Partners.



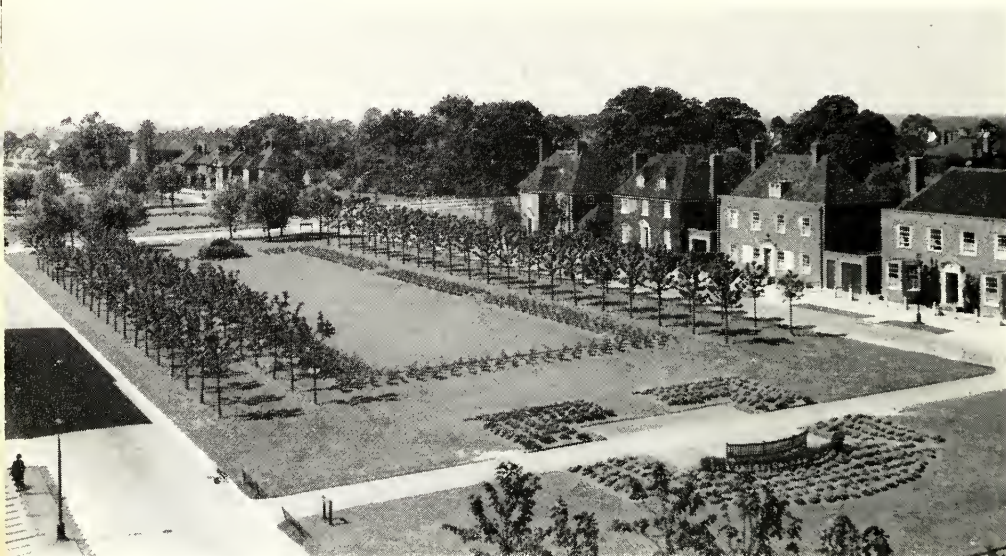


Plate 6.

(a) Council Offices (1930).

Welwyn Garden City.

Architects: C. H. Elsom and Partners.



(b) Parkway, looking south; an early photograph. Double avenues of pleached limes, and formal beds of roses and other shrubs. Twin carriageways. Width between buildings: 200 feet.

(c) Handside Lane. First housing scheme. (1920-21) with open forecourts. Architect: C. M. Crickmer.





Plate 7.
Welwyn Garden City.

(a) Attimore Road. Terrace houses for renting, (1930) (?).
Architects: M. Hennell and C. H. James.



(b) Mandeville Rise. Detached houses for owner-occupiers, (1936).

(c) Dellcott Close (1921). An early example of fine landscaping of open forecourts.





Plate 8.

Welwyn Garden City.



(a) The Free Church, Parkway, (about 1930). Architects: Louis de Soissons and A. W. Kenyon.

(b) Valley Road (about 1925) open forecourt planted for play of light and shadow. Architects: M. Hennell and C. H. James.

(c) Marley Road. Block of four houses for rental, (about 1945). Architects: Louis de Soissons and Partners.



ation of the beauty of trees, shrubs, flowers and grass, and near-unanimity in aesthetic judgment thereon. Letchworth, by its attention to domestic convenience and to landscaping and planting, catered for these deep human desires.

SUCCESS OF THE TOWN

Industrially and commercially it can be claimed that Letchworth has been a conspicuous success. The firms who first went there must have had outstanding courage to choose a location with such uncertain prospects. But the town now has many factories of varying sizes, prosperous and productive, and a balance of employment that has enabled it to weather the dislocations of war and economic depressions, as well as to adapt its economy to changes in demand and methods. Its shopping arrangements exhibit no novelty of layout or organisation; the now-fashionable pedestrian precinct would not have been accepted by shopkeepers when the town plan was prepared. The main centre fulfils its function adequately, and because there are only very small sub-centres it is a place of resort for almost the whole population. Like every centre, old or new, it is now embarrassed by the car-parking problem, but not to the degree that is clogging the hearts of large cities.

Letchworth will seem to the outside observer to have become, after half a century, a pleasant and very well-planned town, bright and free of squalor, but no longer revolutionary in character. Possibly it has lost some of its early social sparkle and self-conscious enthusiasm. But enquiry among its citizens discloses no evidence of serious discontent, though there are sporadic demands, as in almost any other town or city, for a more imaginative policy of improvement in community facilities.

The estate company always tended to a policy of restricting itself to the functions of a good ground-landlord and leaving most of the building and social development to other agencies and the residents themselves. No one could fairly accuse it of an excess of paternalism or 'do-goodism'. Its achievement was however a notable one. It created a town as healthy as any in the world, a well-serviced town in which every family can live in a house with a good garden within easy distance of work, the town centre and open country. It demonstrated that a town based on modern industry can be economically and socially viable, even if built well out of the immediate sphere of influence of a metropolitan centre. And it proved that a new town with an agricultural belt can bring stimulus and the advantage of alternative employment and many services to the surrounding villages and countryside without prejudice to commercial agriculture.

Letchworth at the end of 1962 had a population of about 26,000, 8,300 houses, 100 manufacturing establishments, 200 shops, 16 schools (for over 5,000 pupils), 20 churches and chapels, and many public buildings and meeting places. Its rateable value was about £570,000 and its rates were 24s. 6d. in the £ (county 16s. 3½d., UDC 8s. 2½d.).

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The area of the urban district is 4,897 acres, and its present (1961) and planned use (1971) is as follows:

	1961	<i>Development Plan</i>
Residential	1,388 acres	1,698 acres
Industrial	245	284
Shops and Offices	28	32
Civic Buildings	16	21
Open Space, Public	95	175
„ „ Private	222	173
Educational	15	34
	<hr/>	<hr/>
	2,009 acres	2,417 acres
Green Belt (approx.)		2,000
As yet unzoned		480
		<hr/>
		4,897 acres

The present overall density of the built-up town area is about $11\frac{3}{4}$ persons an acre. Open space (public and private) is about $13\frac{1}{2}$ acres a 1,000 population.

THE SECOND EXPERIMENT

We shall discuss in a later chapter the reasons why Howard's first garden city, though it was regarded by town planners at home and abroad with admiration verging on awe, and Howard himself was internationally honoured as the symbol of a new urban idealism, did not find understanding imitators, private or public, for decades. It might indeed have enjoyed a mere *succes d'estime* and been left on the map as a vestige of an impracticable early-20th century ideal, had Howard not attempted a second demonstration of his concept, with the aid of a younger group of associates, in 1919–20.

The site of Welwyn Garden City was, like that of Letchworth, an open stretch of land, with no existing nucleus, no public services, and only a few narrow dead-end roads. Again the creation of a new town had to be undertaken with inadequate financial resources and without governmental endorsement or encouragement. Welwyn's location (on the main railway 20 miles from King's Cross Station) was certainly more advantageous for making a start. On the other hand Howard's second group of associates, though very able, were not nationally known as successful and dynamic industrialists. All the money available to Howard in 1919, when with almost insane daring he bought the central part (1,250 acres) of the site at an auction sale, was a sum of £5,000 borrowed from a few friends—not quite enough to pay the 10 per cent. deposit required. (The balance was advanced by his agent, the late Norman Savill of the well-known London firm of surveyors.)

The land Howard had committed himself to purchase not being nearly sufficient for a self-contained town, he and his friends had next

to persuade a reluctant adjoining landowner (the fourth Marquess of Salisbury) to dispose of a large additional acreage. Obviously the prospect that the scheme would come to anything must have seemed far from certain, and it was only after much hesitation that the owner agreed to sell. There was the precedent of Letchworth to go on, but at that date First Garden City Ltd. was still in arrears with its cumulative dividend of five per cent., was indeed only paying $2\frac{1}{2}$ per cent. p.a., and was looked on as a poor proposition in business circles. Lord Salisbury, however, did agree to sell enough land to round off a satisfactory site, and though he imposed certain powers of repurchase if the project should fail, he accepted a price that was fair, indeed generous, to the purchasers.

Howard then selected a provisional board of directors, a company was formed, and a prospectus issued offering the public £250,000 in shares entitled to a maximum dividend of 7 per cent., any surplus (as in the constitution of the Letchworth company) to be used for the benefit of the future town and its inhabitants. History repeated itself. The Welwyn flotation, which coincided with the post-war financial recession, resulted in subscriptions of only £90,000—again less than the sum the company had contracted to pay for the land purchases of 2,378 acres (£105,000). Like First Garden City Ltd., therefore, Welwyn Garden City Ltd. had to finance its early development by bank advances and mortgage loans, on which interest had to be paid before revenues could be created by development. And every urban service had to be provided—roads, water supply, sewerage, surface-water drainage, electricity and gas. No statutory undertakings for any of these purposes existed within miles of the intended town area. Small wonder that the local inhabitants, the residents in the county, and the business world generally, regarded the project as doomed to certain failure!

THE WELWYN POLICY

The intentions of the Welwyn company, as expressed in its prospectus, were in principle the same as those of its Letchworth predecessor:

'The town has been planned as a garden city with a permanent agricultural and rural belt, and with provisions for the needs of a population of 40,000 to 50,000. It will thus be seen that the scheme is entirely distinct from a garden suburb, which by providing for the housing of the people working in an adjoining district does nothing to relieve congestion and transport difficulties. . . . The method of planning proposed to be adopted by the company will not only reduce the cost of development, but will also preserve the amenities and health of the town.'

There follows an explanation of the limit of dividend on shares, the important part that the use of surplus revenues for the amenities of the town would play in attracting industrialists and residents, and the cover that the creation of urban values would provide for the shareholders' interests.

'The essence of the company's undertaking is the conversion of

agricultural land having a comparatively small value into urban land ripe for building, and capable of producing good ground-rents The capital value of the land will increase *pari passu* with development. The combination of the estates which have been purchased from Lord Desborough and the Marquess of Salisbury has considerably enhanced the value of the whole.'

Then there is this interesting passage:

'The revenue-producing capacity of the company's undertaking may be gauged from the fact that the area of the proposed town and the population to be provided for will approximate to those of Cheltenham, Colchester, Eastbourne, Southport, Carlisle, Luton or Dewsbury, according to the census of 1911. Within this area the company will command, in addition to its ownership of the fee-simple of the land, a virtual monopoly in respect of a large number of enterprises of a profitable nature. The revenue consequent upon this monopoly will be employed by the company, after due provision for the shareholders, interests, on behalf of the public purposes of the new town.'

The terms of this last paragraph of the prospectus indicate a considerable change of emphasis in development policy from that of the Letchworth company. This was largely due to the personalities and experiences of the four directors who were to play the most active part—Sir Theodore Chambers, Ebenezer Howard, C. B. Purdom and R. L. Reiss, all of whom took up residence in the town, spent most of their time and thought on its affairs, and entered energetically into its social and cultural life. Several members of the staff also—F. J. Osborn (Secretary and Estate Manager and for ten years Clerk of the Parish Council and UDC, who had had experience of housing in London and Letchworth and had become an enthusiastic propagandist of the garden city concept), Captain W. E. James (Engineer and Surveyor to both the company and the Council), and Louis de Soissons, Consultant Town Planner and Architect—lived in the town from the start and were active in many aspects of its life. As citizens these men and others of the staff became in effect a powerful link between the company and the emerging community; the company never had, and never needed, public relations officers or social organizers.

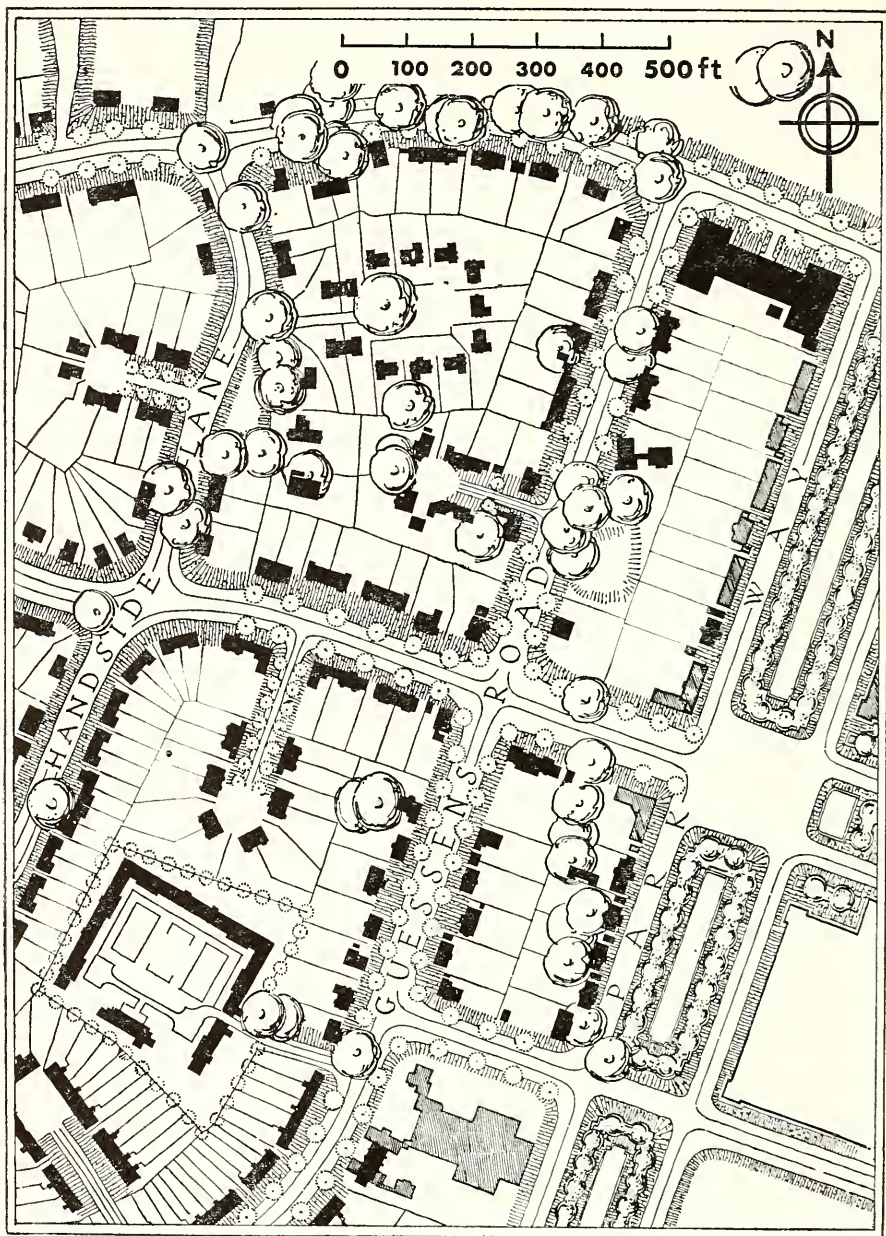
The choice by Howard of Sir Theodore Chambers as chairman of the company proved most fortunate. He had great personal charm, wide connections in political, financial and technical circles, endless enthusiasm and considerable powers of persuasion. A surveyor by profession, he had become interested in town development and the idea of dispersal of industry and population from London before he had heard of the garden city movement, and it was a pamphlet that he had written on the subject that led, through another surveyor, Norman Savill (already mentioned), to his introduction to Howard. Chambers had acquired much knowledge of land values through his professional practice in London, and also through the prominent part he had taken in the Conservative Party's opposition to Lloyd George's land taxation

scheme, in the course of which he had come to see the strength of the other side's case. It is curious, and indeed of importance, that another active director, R. L. Reiss, had been one of Lloyd George's chief lieutenants in the Liberal Party's side of the same struggle, and had perhaps seen the strength of the anti-land-tax case. At any rate, both had come to much the same understanding of the vast importance of the appreciation of land values in urban development, from radically opposed starting-points. Howard, of course, besides being the inspirer of the Welwyn scheme, had had experience of Letchworth's development as a director of First Garden City Ltd. And C. B. Purdom, who had been on the staff of the Letchworth company and a resident of the older town from its beginning, had been a critical observer of its development and finance throughout.

CONSERVATION OF LAND VALUES

This assembly and blend of experiences accounts for the firm line that the Welwyn directors took on the conservation of land values. They were determined not to allow any leakage of increment that could be caulked. They had to grant leases to house-owners at current market values, and this was true also of sites for industrial premises, since persons and firms had, as at Letchworth, to be given strong inducements to settle in the town. But they stood out resolutely against granting long building leases for retail shops and commercial properties, though they had some offers from firms that were at fairly early dates willing to take sites at low ground rents.

Retailers were reluctant to run shops at a loss for an uncertain period before the growth of population would make them remunerative, and it seemed, in the circumstances, likely to be a long time before anything like a comprehensive shopping service could be provided by normal methods of development. The company therefore started its own departmental store, which for purposes of capitalization had to be given a temporary monopoly. This monopoly became a subject of prolonged and at times lively controversy within the town. It was in fact the only way in which a reasonably adequate shopping service could be provided for the town when its population was small without giving away to retail firms or property speculators a big slice of future central land values (as had happened at Letchworth). But experienced as the directors were in estate development, they were novices at running a retail store, and it was difficult, for the salaries they could afford, to recruit top-level management. Moreover, the fact of monopoly caused residents to exaggerate mercilessly any inefficiencies of the single shop, and to agitate vociferously for the admission of others to create normal competitive conditions. Though the issue was a useful counter for local politicians—for those of the Left who could represent the company as a capitalist exploiter and for those of the Right who could represent it as a socialistic destroyer of free enterprise—it may be doubted if there was very severe public discontent. For most residents baiting the company was an amusing and harmless game.



Drawing reproduced from Site Planning in Practice at Welwyn Garden City (Ernest Benn Ltd., 1927).

FIG. 3 — Part of SW neighbourhood of Welwyn Garden City (1920-26), near north end of Parkway. An example of variety of cul-de-sac planning and influence of preservation of existing trees. Parkway, 200 feet wide, has two one-way carriage roads, two double rows of pleached limes, and central lawns with rose beds. In the Town Square the Queen Elizabeth Fountain was placed in 1956. At the south is a church, and in top right corner a temporary departmental store, since transferred. Houses in this section vary from 4 to 8 habitable rooms, and net densities from 12 to about 4 an acre.

The directors were strong enough to stick to their guns, and the Welwyn Department Store, once the symbol of all that seemed most hated in the policy of the company, is now, by common consent, the brightest star in its main centre, and the attraction that brings shoppers from a wide area of Hertfordshire and North London, to the profit of the many other shops now established in its vicinity, as well as of the giant financial amalgamation that has taken over the Store.

The estate company, pursuing logically the policy of conserving land values, did not (with rare exceptions) grant building leases for commercial properties. It financed and built the shop premises, and let them on short leases at rack rents, at the expiry of which the lessees (entitled under British law to security of tenure) continue occupation at a rent fixed by agreement, or if necessary by arbitration. Thus revenues from the commercial area rise with the increase of population.

A similar policy was followed to some extent in the industrial area. While large firms mostly took sites on 999-year leases and built their own factories, many sectional factories were built by the estate company and let on occupation leases, usually for 7, 14 or 21 years, sometimes for less. Besides making it easy for firms to start production in the town, these rented factories have proved very important to the development corporation that has succeeded the company, since on the renewal of the leases rents can be adjusted to current market values. When there are changes in money values and increases of building costs, rents rise well above the original levels. On the other hand, after a period of inflation, the holders of long leases of factory and house sites continue to enjoy rents much below the current market value—a leakage foreseen but considered inevitable and of far less quantitative importance than in the disposal of commercial sites.

The Welwyn Company, despite the chronic shortage of share capital in its early years, contrived, by such expedients as the issue of debentures at fixed interest and borrowing on mortgage, to finance many other developments, some of which, notably the electricity undertaking and a building company, proved profitable. Others, such as the theatre, the gravel plant, the brickworks, and the light railway, were less remunerative and were later disposed of or discontinued.

The company's original constitution, limiting dividends and earmarking surplus revenues and increments of value for the benefit of the town, must have been a factor in reconciling business and residential lessees, and tenants, to the deliberate and declared policy of exploiting to the full the monopoly created by single ownership of a complete town site. Another confidence-giving factor was the institution of the Civic Directors—three persons, exercising full powers, appointed by the Parish Council and later by the Urban District Council. These elements of the constitution could be, and were, cited in answer to critics within the town.

Both the dividend limit and the Civic Directors, however, disappeared in 1934, not through bad faith on the part of the shareholders,

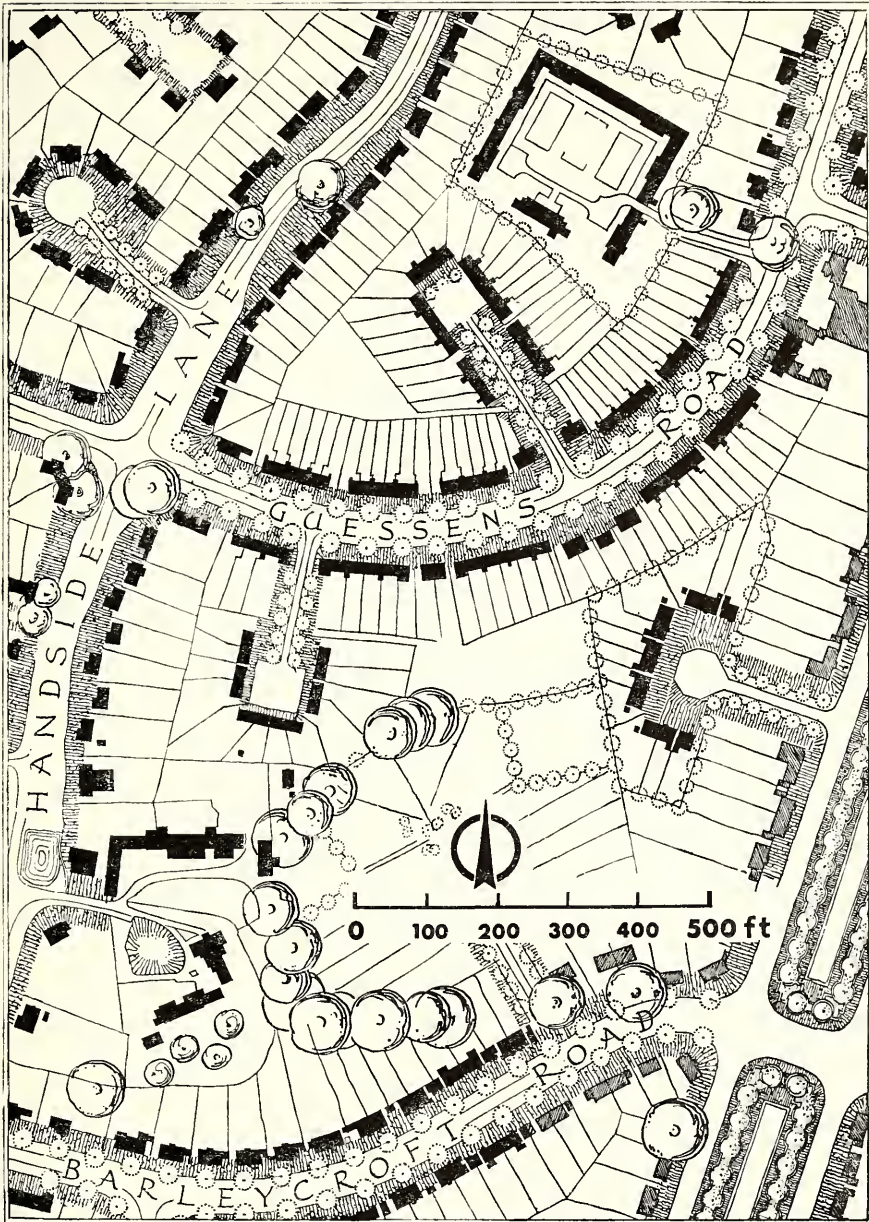
but because of a financial crisis and a reconstruction in which the debenture holders, who were not parties to the 'contract' between the shareholders and the town, took over the equity. New men were placed on the board, though several of the former directors remained, the capital was reorganised, the £1 ordinary shares were reduced to two shillings, and various classes of debentures were converted to shares without any dividend limit. One of the major causes of this drastic change was the national economic slump of the 1920s and a heavy fall of price levels subsequent to the company's initial capital expenditure. Another was that a sufficiency of share capital having proved unobtainable despite immense efforts, the large amounts of fixed-interest securities issued at a pretty high rate of interest (6%) made the company too highly geared—which might not have mattered for a property company in normal times, but was a serious disability on a general fall of price-levels. The directors were in the hands of the debenture holders; whether they could have made a better bargain with them and saved more of the future revenues or increments of value for the town or the original shareholders is a question that may be asked, but which it would be futile at this date to attempt to answer.

MAINTENANCE OF PLANNING STANDARDS

It is to the credit of the company under its new shareholding control that it did not, after the reconstruction, in any way lower its standards. The planning and development of Welwyn Garden City became famous as the best example of whole-town design. The company maintained throughout the 28 years of its existence its architectural control, its insistence on good building quality, its standard of planting and landscaping, and its policy of providing all the social amenities it could afford.

There are some architectural lapses, due to the necessity of conciliating important prospective lessees at times when disposals of sites were specially difficult or the firms concerned specially desirable to attract, and some patches of over-standardization of design, especially in low-rent housing schemes. But these falls from grace are few. A general standard of design and harmony much above that of the first garden city, and in its time only rivalled by Hampstead Garden Suburb, was achieved. Welwyn is not a suburb, but (like Letchworth) a self-contained industrial town in which something like 90 per cent. of the population work as well as reside. In that category it must take rank as a town-planning masterpiece.

The fashion in architecture has since changed: the Georgian style that Louis de Soissons took from Welwyn's Hertfordshire surroundings, freshened and adapted with great success to contemporary domestic and business requirements, no longer seems to devotees of a later convention 'exciting' (their word); even the superb planting and spacious landscaping of the earlier section of Welwyn are derided as 'romantic' or 'non-urban' by some fashion-obsessed critics. But to the families who live



Drawing reproduced from Site Planning in Practice at Welwyn Garden City (Ernest Benn Ltd., 1927).

FIG. 4—Layout of part of earliest (SW) neighbourhood of Welwyn Garden City (1920-26). Groups of 50 to 100 lowest-rented terrace houses alternate with groups of owner-occupied and medium-rented types and one quadrangle of flats with hotel. Old farm buildings and fine trees, carefully preserved, influenced the plan. Note characteristic use of culs-de-sac, each different and treated as architectural unit. First houses (Handside Lane) have open fore-courts, as have most culs-de-sac and some later roads; all back gardens are enclosed by hedges. Planting of trees and flowering shrubs is profuse and highly varied, enhancing the architectural variety. Town plan by Louis de Soissons.

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and work in it, and to most visitors, professional or lay, Welwyn Garden City is a supremely pleasing town visually, as well as efficient technically and human in scale.

At the time of its takeover in 1948 by a government development corporation under the New Towns Act Welwyn Garden City had a population of 18,500. Its development since that date is dealt with in a later chapter.

Chapter V

TOWN GROWTH AND GOVERNMENTAL INTERVENTION

'While planning theory holds that it is never too early to begin planning, experience shows that there will be no public outcry for planning, and little, if any, effective planning done, below a certain threshold of local difficulties. In other words, the situation has to get worse before anyone will stir himself to try to make it better.'

—DENNIS O'HARROW, 1961

As the major instruments of civilization towns have brought to mankind gifts of incalculable magnitude, at the price of terrible deprivations. No accountant-philosopher could prepare a millennial balance sheet of their material and moral assets and liabilities. But the ratio of ills to blessings has been so high, especially in the accounts of large towns, that it is lamentable that recognition of the need for control of their extent and location has come so late. In the literature of political philosophy such a recognition has been absent until the last few years. Neither the prescriptions for desirable town size by Plato and Aristotle, the protests of poets, divines and novelists, nor the projects for colonial settlements and small-scale communities, not even More's *Utopia*, seem to have extended the concept of local and voluntary limitation of urban size to that of generalized governmental regulation. So far as we know, the first academic hint of it was given by Professor Alfred Marshall in his evidence to the Royal Commission on Imperial and Local Taxation (in 1899, the year after the publication of Howard's book).

'The central government should see to it that towns and industrial districts do not continue to increase without ample provision for that fresh air and wholesome play which are required to maintain the vigour of the people and their place among nations. . . . We need not only to widen our streets and increase the playgrounds in the midst of our towns. We need also to prevent one town from growing into another, or into a neighbouring village; we need to keep intermediate stretches of country in dairy farms, etc., as well as public pleasure grounds.'

Of course the municipal regulation of certain details of internal town development has existed from very early times. In all towns, whether originally planned or not, there had to be rules to maintain the width of public streets and passageways against the constant efforts of frontagers to encroach on them with building extensions or enclosures for the

display of saleable goods or other uses. (This battle still goes on: witness the tables and chairs outside restaurants on the sidewalks of Paris, the seductive samples of their stock that eager traders deposit in front of their windows, and the stands and boxes of newsvendors and hawkers). Building regulations have had to be imposed, as we have already noted, to reduce risks from fire or disease, to limit heights and coverages, and to prevent obstructions to light. These are in effect primitive density controls.

Such ordinances, however, did not limit growth. Nor did they amount to an attempt to ensure that a town should be or remain a good piece of apparatus for the purposes of civilized living. That vital function was left to the adventitious and often clumsy interplay of a complex of separate and self-regarding forces. And up to a point and in certain respects these forces produced, if not an ideal, a workable result.

For the most part the effective decision as to the location and use of new buildings has rested with individual landowners and entrepreneurs, within such few rules and restrictions as have from time to time been found necessary to check acutely-felt disadvantages or difficulties. These were in their time, it should be realized, bold and imaginative governmental departures. If in the light of a wider understanding of town structure and function they now seem arbitrary and unskilful, and at best merely corrective of superficial symptoms to the neglect of organic causes, we have not yet earned the right to feel much superior. (Consider, for example, the present attempts to palliate the urban traffic problem without attending to the matter of traffic generation.)

The reasons for this failure should be understood, because they continue to operate today. A bias against governmental interference is characteristic of any free-enterprise society; and in principle it is a healthy bias, because it is almost wholly on the basis of individual or group initiative, risk and responsibility, that the main advances in manufacture, trade and culture have been made. The process goes far back, but we can visualise it best by considering what has happened in Britain since the Industrial Revolution. In quest of profit for themselves—and, whether consciously or as a by-product, of benefit to society—inventors and men of enterprise have spent time and money in developing new mechanical devices and systems of productive organisation. In siting their factories and other establishments they had to take into account many technical considerations, such as water or fuel supplies, raw materials, availability of labour, and distribution to markets. They had usually some choice of landowners to bargain with. They were free to settle in any place that suited their enterprise. Their job was tough enough; they had neither the obligation nor the knowledge to consider the effects of their enterprise on the location of population or the character of towns and rural areas, or even on the interests of other businesses (an important point). They were rarely obstructed by government, and even more rarely helped, and then only in minor details.

TOWN GROWTH AND GOVERNMENTAL INTERVENTION

THE MAINSPRING OF MATERIAL PROGRESS

Whatever we may see or imagine now to be the possible role of government as the promoter or sponsor of economic enterprise or cultural progress, it is a fact of history that the major scientific and industrial advances have originated in relatively individualistic societies. Karl Marx was as well aware of this as Adam Smith, though his religious belief in Historic Fate (coupled with a stern moral disapproval of the agents Fate manipulated) led him to different prognostications from those arising from a classical economist's analogous faith in the Invisible Hand of economic law. We need not believe wholly in either deity to understand why the governments of individualist societies have been slow to interfere with processes that, despite their frightful incidental consequences, were demonstrably increasing overall wealth and power. The benefits were outrageously badly distributed, in the character of urban living no less than in income, hours, personal freedom, security, conditions of work, and social satisfaction generally. But in the full tide of the Industrial Revolution people of the dominant classes, and even many of the grossly underprivileged, had a profound belief in and enthusiasm for 'progress'; Macaulay's school-boy was as thrilled by scientific and industrial innovations as the schoolboy of today is by the possibilities (and impossibilities) of space travel and atomic physics. The inertia of governments in dealing with such appalling by-products of industrialism as child labour, starvation wages, high urban death rates, overcrowding and slums was not due entirely to lack of or defiance of conscience. Statesmen, good as well as bad, were chary of touching the mainsprings of progress.

SOCIAL COMPUNCTION AND CLASS SEGREGATION

For governments of the past, this is an excuse, though not a justification, for long delays in reform and a secular failure to attend to the whole great subject of town structure and growth. One reason for this was that till well into the nineteenth century the electoral franchise was limited to the main beneficiaries of the rise of production and wealth. But though all men are largely actuated by self-interest, and extreme individualism has at times had the sanctity of a moral code, only a minority are utterly callous. What has impeded the stirrings of conscience, and still does so today, is the geographical segregation of income classes, especially in large towns. It is possible to live a prosperous and pleasant life in a city, and to develop a complacent philosophy, unconscious of the miseries of vast numbers of people not far distant in the same city. And possible not only for hard-faced 'capitalists'. We knew a senior civil servant residing at Richmond and travelling daily to Whitehall, who thought London a superbly gracious city, and died without ever having been disturbed by thoughts of living and working conditions in Soho, the East End or Bermondsey. Probably even today only one defect of his city, not serious in his time, would touch that man—the overcrowding of the Richmond tube at peak hours. He was not

an unsympathetic type of chap at all. But he could not be roused to indignation by distresses not forced continually on his notice. Most of us are like that. And the fact has a bearing on the attitudes and actions of democratic governments in all matters, including the matter we discuss in this book.

GOVERNMENTS AND PUBLIC OPINION

It is only very recently that the planned redevelopment and renewal of towns, and the creation of new towns, have become issues of social or public policy. And we are still far from clarity of thought, true consensus of opinion, or resolute action, on the chronic or emergent problems. Democratic governments seldom enter a new field of control except to attempt to remedy some considerable evil or inconvenience that presses strongly on some politically vocal section of society. The sections that effectively influence policy may be of utterly different orders of numerical, economic, or social importance. They may be motivated by simple self-regarding interests, by aesthetic or religious or philosophic ideals or conceptions contagiously spread, or by human sympathy with fellow-subjects disadvantaged by things as they are or by the way they are going. In the arguments that precede and shape public policy, all these forces are mingled, and each has its own validity. Political parties, interested pressure groups, and public-spirited voluntary societies endeavour both to create public opinion and to bring it to bear on governments; and within those organisations there are often intensely convinced or persuasive individuals whose preoccupations, whether socially important or not, are reverberated in both directions.

It is idle to quarrel with the facts of political life. Some such opinion-forming and decision-making process must go on in every society, democratic or authoritarian, though very different numbers of persons in very different groupings may take part in it. If we believe in progress in enlightenment, if we believe some things matter more and others less, we have to understand the political process. And we have to be clear in our own minds what we think society should do, and why.

AIMS OF PUBLIC POLICY

As this book takes sides on certain issues of town development and town planning, the authors' assumption as to the fundamental aim of social policy may usefully be stated, though in so doing we make no pretension to verbal precision, and are conscious that the assumption will be regarded by many as so obviously correct that it is naive to state it. We do so because experience has taught us that an assumption that almost all decent persons at once accept when it is stated in their hearing, can be ignored by such persons in discussions of social policy affecting aspects of passionate interest to themselves.

Our assumption is that the purpose of any defensible social policy is to advance, to the extent possible, human happiness, and to reduce, to the extent possible, human distress or discomfort. The improvement

of public health, now so accepted a purpose as to seem an end in itself, is really a means to this end. So is the raising of the standard of living or real income, of housing, of working conditions. So also is the increase of productive efficiency in industry, agriculture, trade and administration; though there could be deductions from the sum of happiness if this increase involved loss of desired leisure or the worsening of conditions of work. So again is the improvement of the look of the world: always provided that it is thought of as the look of the world to people in general, and that the improvement is to the liking of all or most of those who care about looks, and not merely a coterie with exceptional tastes.

This last conception, of general or maximum enjoyment or satisfaction, comes into the assumption, though it is difficult to formulate. Many attempts have been made—'Life, liberty and the pursuit of happiness'; 'The greatest good of the greatest number' (or 'of all'); 'The optimum of human well-being'; 'Life more abundant'—and all are gallant but imperfect approximations. We will not add another. The common underlying idea is clear enough, and it is of the utmost importance in the context of town and country planning. If it is held in mind, it is corrective of many faulty emphases that have befogged discussion of and hindered agreement on a sound town development policy.

INFLUENCE OF REFORMERS AND PRESSURE GROUPS

We do not overlook the complication that human beings differ: not only in their likings, but even more in their awareness of possible satisfactions. Reformers, like salesmen and advertisers of commercial products, sometimes have to educate their prospective customers in the merits of new or little-used kinds of goods that they believe the customers will be glad to have when these merits are known and understood. And often the placing of their goods on the market has to be preceded by experiment and the distribution of samples for trial. The commercial producer may need to consider only the potential acceptability of his goods to a select clientele. The advocate of a social advance that requires governmental action has a wider responsibility—to be sincerely convinced that what he proposes will, when produced, enhance general satisfaction.

His task, moreover, differs from that of the commercial producer-salesman, in that he has to operate, not through simple advertising and distribution, but through the lengthy and complex political process to which we have referred. A democratic regime (that is, one in which all adult citizens have freely disposable votes in electing bodies that appoint governments) seems on the face of it, and in fact is, more likely to ensure that governmental actions make for the satisfaction of the many than tyrannical, feudal, or dogma-based regimes, however benevolently minded; but in the collective operations of a large society in which the desires of millions have to be transmitted to authority through a layered series of functionaries there cannot be the simple supplier-consumer

relationship that exists in the free and direct selling and purchase of goods. The acceptability of the final product of governmental activity cannot be tested and revised so immediately, by sales-charts and profits and losses, as that of commercial products. Governments of populous states, confronted with a multitude of affairs, are far less well-placed, not only to find out what is most profitable to do, as business firms must, but to find out the acceptability of what they have done.

AN EXTREME CASE OF IMPERFECT COMPETITION

What has been missing in the historic process of the development of towns is the direct influence of the mass-consumer on the product as a whole. There is of course competition between towns in attracting population. But the operative attractions are not those of a generally convenient, economically efficient and humanly pleasing environment. Within a town there is some competition of desirability between particular dwellings, and between residential districts or suburbs where commercial producers set standards of openness, planting and other amenities. Holiday towns and pleasure resorts compete for transient visitors by advertising environmental qualities. But the attractions that an ambitious industrial town seeking further growth stresses in its publicity are convenient sites for factories, a pool of labour, port and transport facilities, cheap electricity and so on. Pleasing surroundings or cultural endowments may be mentioned, usually unconvincingly, as a make-weight.¹ They have not counted for much in urban competition. It has been safe for entrepreneurs to rely on the common experience that where the jobs are the workers will follow. And in general the mass of workers go for the jobs, and take a chance of what kind of housing and living conditions they will find. The executives and better-off employees can usually find decent homes for their families not too far away in a suburb where competitive production has been influenced by effective consumer choice.

THE RATIONALIZATION OF CONGESTION

In a large town to which people are drawn by opportunities of employment, the mass-consumer's preferences have relatively little effect upon his residential environment. Even when the local government is spurred by the danger to public health or by social compunction to clear slums and provide rehousing, consumer choice is so vitiated by prevailing conditions that a truly satisfactory environment is not produced. This reflects the imperfection of the governmental process now intervening of necessity, but not yet inspired by a general public understanding of the possibilities, or by the advice or leadership of a wise, fully-informed and socially-conscientious corps of administrators and technicians. So far, in rehousing notably, imperfect commercial com-

¹Slough Trading Estate Ltd. at one time dangled before manufacturers the nearness of Stoke Poges where they could recall Gray's *Elegy in a Country Churchyard*; but it is unlikely that the great success of the estate owes much to that attraction. For other examples see F. J. Osborn, 'Industry and Planning', *Journal of Town Planning Institute*, July 1932.

petition has been partially replaced by imperfect governmental response to the mass-consumers' needs and desires. Public intervention is a real advance, of great promise for the future, but its sensitivity and skill have a long way to go before it is adequate to economic and social needs.

Unintentionally, but in effect, advantage is still being taken of the unfortunate situation of the city-masses. In place of utterly detestable slum conditions they are in many cities being provided with conditions certainly much more healthy and tidy but far short of those that modern art and technique could now provide.

It is perhaps easier to see the tendency to pursue the second-best, or the just tolerable, in housing by observing the processes of reconstruction in the larger cities of continental Europe, such as Paris, Lyons, Rome, Berlin or Moscow, where families who have occupied for generations the sub-divided floors and rooms of old bourgeois houses or proletarian tenements or shacks, are moved to five-storey or six-storey walk-up flats where the rooms are still small, but the blocks are so spaced as to receive more daylight, have modern cooking appliances, baths or showers, and other fittings, and are set among trees and grass. Relatively they feel in luxury. But what has really happened is that these people have been conditioned over the centuries to put up with a deplorable degree of congestion, accompanied by decay and squalor, and then the congestion has been rationalized and modernised and the squalor cleaned up. Essentially the same thing is happening to the less privileged in British cities. Most of the better-off people, who are politically the more vocal and assertive, have long ago moved to garden-houses in the suburbs.

Viewed locally and immediately the change from dilapidated slums to new and clean multi-storey dwellings is an improvement. Often it is the best that a municipal authority within its own scope of action can do. The victims also believe it is the best, for the time being. But it is not good enough. Moreover, in an age of economic advance it may well be short-sighted. Statesmen and economists contemplate a doubling of the general standard of living in Britain in the next twenty-five years. Even if this is only partially attained it must reflect itself in an effective demand, by many more millions of families, for houses of the character, quality and favourable situations now sought by those of the higher levels of income. Many of the multi-storey tenements now being built with extravagant subsidies in old cities may cease to be acceptable long before their cost is written off.

ADAPTABILITY OF THE HUMAN SPECIES

The fact that the positive evils and relative inconveniences caused by city growth advance almost imperceptibly, and in modern conditions scarcely ever reach a crisis compelling instant public action, is a misfortune for mankind. There was a harsh limit to the growth of a Greek city state in the exhaustion of the food-producing capacity of its domain and the contiguity of other armed city states into whose area it could not expand. So at a certain stage it had to colonize at a distance, and this

necessitated governmental action. No such critical point arises for modern Los Angeles, the type city of the automobile age, where the general (in itself agreeable) habit of dwelling at ground level, coupled with population increase, produces a stretch of continuous building 50 miles across, and roads, overpasses, underpasses, and car-parks swallow up two-thirds of the city centre. Los Angeles Man has adapted himself to living a large part of his life in an endless line of automobiles; and as his city has not stopped at a diameter of 50 miles, why should it stop at 60, 70, 100 miles? No decisive reason at all; nothing but the absent factor of collective common sense. In Hong Kong, where few can afford automobiles, growth has produced a city of abnormally tightly-packed buildings; Hong Kong Man has therefore obediently adapted himself to living at 1,500 persons an acre in 4-storey tenements. And this is not the last word: the city's able technicians are now convinced that he and his family can live 'comfortably and cheaply' at 2,000 an acre in 20-storey tenements.¹ The sky is no longer the limit: it offers a no more fixed barrier than suburban sprawl to man's environmental tolerance—no deadline of impossibility that absolutely compels his governments to intervene. The secular neglect to check the growth of town populations is therefore entirely explicable. But inevitably with that growth some elements of comfort, convenience and amenity steadily deteriorate. The check does not come until social compunction or popular will decides that deterioration has gone altogether beyond bounds. Tragic as it is, this is the lesson of urban history.

GOVERNMENT AIDS TO OVERGROWTH

Unfortunate for urban man as the failure of governments to attend to the excessive growth of towns has proved, their reluctance to do so has, as we have shown, been consistent with a basically *laissez-faire* philosophy. No such justification or defence can be sustained for types of governmental intervention that positively facilitate continued overgrowth or counteract spontaneous economic checks on overgrowth. Tendencies to such economic checks certainly occur. If the disadvantages and inconveniences of a city become severe, business enterprises and residents are disposed to move out. For example, the rises of central rents and land prices, of travel fares, and of the overall cost of living, which are reflected also in higher rates of wages and salaries, coupled with cramped premises and traffic congestion, increase the costs of production, and tend to impel businesses to seek cheaper and more spacious situations. In orthodox economic theory, progressive disadvantages should in time stimulate an automatic correction. And to some extent and in a disorderly way they do. In the USA, for example, the flight of many families to suburbs has left in city cores extensive 'blighted' districts where values have fallen so low that tax-delinquency occurs, though even at minimum site costs commercial rebuilding of workers'

¹J. M. Fraser: 'Planning and Housing at High Densities in Two Tropical Cities': Report of Town and Country Planning Summer School. Town Planning Institute, London (1960).

dwelling is still unremunerative. We have referred to this economic paradox in Chapter II.

Faced with the problem of slums and decaying or blighted residential districts, municipal governments have had to intervene with clearance and rehousing projects on a considerable and expanding scale, covering the financial losses on them out of taxes from the city as a whole. In many cities municipal governments have also had to subsidise from taxation the provision of mass-transportation systems. Such costs, and those of street widenings, new arteries and ring highways, overpasses, underpasses and tunnels, continually necessitated by town growth, become a heavy burden on business and residential tax-payers, and in theory should check growth and even produce decline. Envisaged by the steely eye of an academic economist, the climactic corrective of urban overgrowth ought to be a collapse in land values, municipal bankruptcy, and a reconstruction in altogether different shape. This has not happened—yet. And we do not want it to happen. But the crisis is being evaded, or postponed, in the wrong way.

When the burden on municipal taxpayers becomes unbearably heavy, municipal governments call for aid from their national (U.S., state or federal) government, and being electorally immensely powerful, they succeed in getting substantial financial remittances. In Britain this takes the form of differential subsidies for high-density housing (to which we will refer in Chapter X), percentage grants for street improvements, police and other purposes, interest-deferred loans for mass-transport, and block grants designed to equate tax incidence as between different towns and districts of the country. In the USA there are parallels in the 'matching' grants for rehousing, the grants (Act of 1962) of two-thirds of the unremunerative cost of improved mass transportation, and (we understand) federal tax-exemption on certain state or municipal loans. Such aids from central to local governments are no doubt in principle justifiable, and necessary, in countries where the main taxes are collected centrally. But in discussions on public finance, in Great Britain at any rate, little attention appears to have been paid to the effect of percentage grants on the future distribution of the population. Some of these, we believe, positively facilitate the further growth of towns now by common consent too large.

The accepted principle underlying such governmental aids is the relief of excessive local tax burdens—financial equity between places where people are relatively poor, relatively crowded, relatively few in relation to the area served. The bigger housing subsidies given to London and other congested towns are designed to enable them to rehouse their workers at rents comparable with those in smaller towns, where building costs and land prices are much lower. The intention is understandable, but such differential grants have the effect of enabling an overgrown city to retain its excess population and to grow further. Indirectly they are subsidies to the firms by which the rehoused persons are employed, who can therefore establish themselves, remain or expand

when economic realities would warn them not to come or to move out.

We are not ourselves against compassionate aid from national governments to large cities. Subsidies may be necessary for their redemption from long-accumulated evils and difficulties out of which they cannot extricate themselves by their own resources. What is imperative is that government intervention, now that it has come, should be so contrived as to reduce, not to intensify, the urban difficulties that necessitate it.

Chapter VI

EVOLUTION OF THE NEW TOWNS POLICY

'All reflection on the problem of a society changing itself tends to emphasize the necessity of "gradualness". The use of intelligence, even in the scientific sense, and in fields where conditions are most favourable, involves a tremendous "overhead cost", especially in the form of time.'

—FRANK HYNEMAN KNIGHT: *Economic Theory and Nationalism* (1934)

WE have mentioned in Chapter IV the propaganda society now known as the Town and Country Planning Association, and its activities prior to the foundation of Letchworth in 1903-4. From that time onward the history of the garden city movement is bound up with that of the town planning movement, then engaging interest in overlapping sections of opinion, of which the best account so far is in William Ashworth's book *The Genesis of British Town Planning*.¹ We can only briefly sketch here the garden-city or new-town strand in the story. It is difficult for the present authors, ourselves active members during recent phases of the Association's campaign, to strike the right balance between objective truth and modest understatement in evaluating its share through sixty years in influencing opinion and policy. Beyond doubt its persistent advocacy, along with the visible demonstrations that it inspired at Letchworth and Welwyn, have been weighty factors in the evolution of planning thought. As members we have been particularly conscious of the obstacles the Association met in gaining public and authoritative attention for its proposals, and some account of these should be of interest—particularly as some of them still hold back the thoroughgoing adoption of an urban dispersal and new towns policy. (See Chapter X.)

Sidney Webb used to say that the normal lapse of time from the first promulgation of an important reform up to its general acceptance was about 18 years, in proof of which he was in the habit of quoting impressive instances. From 1898, the date of Howard's book, to 1946, the date of the New Towns Act, the interval was 48 years. Why was the progress so slow? Some critics have been disposed to place part of the blame on the fluctuations of clarity and intensity in the campaign of the Association itself, and certainly there were such fluctuations. But small in membership and weak in financial resources as it was, the Association never ceased to keep the garden-city idea and the two experiments in evidence. The fact that the idea did not catch on earlier

¹Routledge and Kegan Paul, London, 1954.

with the public was the cause rather than the consequence of the Association's relative ineffectiveness in certain phases. No doubt if in the 1900s or 1920s the new-town idea had engaged the enthusiasm of some popular literary genius of the order of Rousseau or Tom Paine, some dynamic demagogic statesman like Lloyd-George, or even some astute as well as dedicated reformist wire-puller like Sidney Webb, things might have moved faster. Howard and his articulate followers, Unwin, Neville, Thomas Adams and others, were themselves no mean propagandists. They stated the idea lucidly and did lodge it in many minds. General acceptance of their propositions was however delayed by two pieces of sheer historical bad luck—the coincidences in time of the suburban boom at the turn of the century and of the great national housing drive of the 1920s and 1930s.

Almost contemporaneously with the publication of Howard's book, the development of electric traction and the internal combustion engine began to revolutionise urban transportation, and it became practicable for city dwellers to obtain without a serious increase in travel time acceptable dwellings in suburbs. Nothing was there to stop the consequent exodus of prosperous families from crowded city quarters to new and more spacious environments. No governmental powers were existent or in prospect to prevent the simultaneous expansion of industrial and commercial business in city centres, drawing towards the agglomerations further populations, some of whom reoccupied the dwellings vacated by the exodus, and others of whom settled on the suburban fringes along with those who were flocking out from the centres.

THE TOWN PLANNING MOVEMENT

It was the untidy fringe developments created by the haphazard outward rush that, from the 1860s on the continent of Europe and in 1909 in Great Britain, prompted the first town-planning legislation. Planning control was indeed a long-needed governmental function, and the Association obviously had to support its introduction and subsequent application. Some of its leading members, notably Unwin, took a leading part in the advocacy and drafting of the 1909 Act. The Association was opposed in principle to the addition of further suburbs to London and other cities too large already; but clearly suburbs were going to be built around many towns, and planning-minded people could not be indifferent to the new means of improving their character. After some heart-searchings over what seemed the questionable case of Hampstead Garden Suburb (1907), for which Unwin and Parker were appointed as planners by an independent public utility company, the Association decided that if a new suburb had to be added to London a good suburb would certainly be better than a bad suburb, without departing from its view that garden cities (new towns) were the only solution for the fundamental problem.

This tactical decision need not in itself have caused any obscurity

of principle. Unfortunately the application at Hampstead, and in other contemporary suburbs and housing schemes, of the attractive new pattern of residential design, layout and planting that Unwin and Parker had matured in the first garden city was seized upon eagerly by housing developers all over Britain and in many other countries. Commercial builders, public-utility societies, writing architects, even some town planners (but not Unwin, who was clear-minded) appropriated Howard's carefully defined term of art, 'garden city', and used it indiscriminately as a label of prestige for any kind of open residential development—suburb, industrial village, or public or co-operative housing estate. 'Garden city' and 'garden suburb' became in popular parlance interchangeable. The residential pattern that both terms were taken to stand for became the fashion and then the popular norm; and it remains the popular norm today, with variations in generosity and parsimony of space. The fundamental principle exemplified by the first garden city—that of a self-contained industrial town, for working as well as living in, and limited in extent by a country belt—was temporarily understood by thousands of technical and political visitors, effusively praised, mentally pigeon-holed as something worth consideration some day, and, in the press of practical suburb-building, dropped out of consciousness or relegated to the realm of beautiful dreams. Except in rare cases the initiation of new towns would obviously have required governmental powers for the choice of location and the acquisition of large sites; to build them was therefore beyond the scope of municipal administrators, co-operative housing groups, and technicians. And so the suburban flood went on, often, despite the expostulations of Howard's followers, under the stolen banner 'garden city'. And many able planners, who would no doubt have preferred to be designing genuine new towns, were caught in the flood and swept away from active interest in the movement. They are not to be severely blamed, save in so far as they contributed to the terminological confusion. It is difficult for a technician to earn a living in an ivory tower.

Deprived during this period of the concentrated interest of its technical personnel, and handicapped in the recruitment of lay support by the confusion of terms, the Association languished somewhat in effectiveness. Its journal, *The Garden City* (the world's first periodical in the planning field, started in 1904 and now known as *Town and Country Planning*), kept Letchworth's progress and purpose in the eye of a small public, but inevitably much of its space was occupied by information about the progress of statutory town planning and about the planned suburbs and housing estates proliferating in Britain and overseas. Much journalistic ingenuity is required (as we have discovered) to put the same case over and over again in different words and with the fresh data, illustrations and anecdotes necessary to interest readers. The journal was never in a position to pay professional writers, and at times the shortage of bright copy as well as of cash compelled it to fall to quarterly instead of monthly publications. Its coverage was erratic

and incomplete, but its files are indispensable to students of the history of the movement.

THE HONOURED BUT UNSUNG

Our mention in these pages of the names of some of the members of the Association who figured in its affairs at various times must not be taken as an attempt to rank them in order of influence or devotion as compared with the many whom we do not name. In any history names may survive through accidents of titular position or presence on the scene during episodes that the historian thinks significant, no less than through personal thoughts, convictions or deeds. Assessments of relative effectiveness are not implied—are indeed impossible. Names can be found in the records of the Association of a long succession of tenacious honorary officers, committee members and lecturers, and of hard-working (and ill-paid) secretaries and editors, who sustained its activities through many difficult years. Devoted service was given by obscure adherents who, like the protagonist of Upton Sinclair's *Jimmy Higgins*, had no thought of personal benefit from their endeavours and never saw the results. Credit is due from survivors, who have seen the results, to the hundreds of persons, eminent and forgotten, who kept the garden city movement in being through times of hope and times of discouragement. Without their efforts the coming of the new towns would have been delayed for generations.

THE NEW TOWNS MOVEMENT AND PUBLIC HOUSING

Towards the end of the war of 1914–18 another reassertion of the true garden city principles was made by a small group consisting of Howard, F. J. Osborn, C. B. Purdom and W. G. Taylor, calling themselves the New Townsmen. Howard in letters to the press, and Purdom in a pamphlet of 1917, were the prime movers in this revival. The group issued in 1918 a little book restating the case in the light of experience at Letchworth and proposing the creation with Government support of a hundred new towns as part of the expected post-war reconstruction policy.¹ The book aroused appreciable public interest and restimulated the Association, which welcomed its fresh accent, absorbed the New Townsmen into its ranks and appointed Purdom as full-time secretary. With the help of a generous grant from the Joseph Rowntree Village (now Memorial) Trust and with Richard L. Reiss as chairman of the executive, a vigorous campaign for new towns as an integral part of the expected national housing effort was undertaken.

But again public and authoritative attention was distracted—this time by the strength and popularity of the inter-war housing drive. New and admirable human standards of accommodation and layout had been formulated by the Tudor-Walters Committee of 1918², in which

¹New Townsmen (F. J. Osborn): *New Towns after the War*, Dent, London, 1918. Revised and reissued, 1942.

²Report of the Committee on the Housing of the Working Classes. HMSO, London, 1918.

Raymond Unwin was a powerful influence, and the recommendations of which were based not only on Letchworth, Earswick and Hampstead experience but also on evidence collected from all over the country as to the working people's housing desires. This was an epoch-making document, setting standards for low-rent housing that were governmentally adopted for two decades; but it was a housing report purely; it was not concerned with large-scale town planning or new towns. Lloyd-George's well-phrased slogan for reconstruction, 'A Land fit for Heroes to Live in', was soon boiled down, in practice as well as in words, to 'Homes for Heroes'. The returning soldier could envisage a 'home'; he knew the sort of house and garden he and his family wanted. But he had no picture in his mind of 'a Land for Heroes'—good towns for work as well as home life in a green and pleasant land. The Association tried to enlighten him. But its still small voice was drowned by the din of hammers building four million houses—good houses on the whole, but, as it cried unheard, mostly in the wrong places.

Some great-city authorities made really imaginative efforts to design their major housing projects as 'quasi-satellites' with community facilities—notably Manchester at Wythenshawe and Liverpool at Speke and Knowsley, where also some provision was made for local industry—and the planning of these did represent a considerable advance. Yet they were still continuous extensions of overgrown agglomerations, not true new towns.

The Association lost the full-time services of some capable propagandists in this period by the suction of Howard, Reiss and the New Townsmen into the demanding work of building Welwyn Garden City. And once more, in order to survive, it had to combine pursuit of its main mission with an active interest in the preoccupation of the moment—housing, housing, housing. But the Welwyn group never lost sight of the wider objectives in their preoccupation with their specific project. And the Association still had singleminded enthusiasts like Dr. Norman Macfadyen (of Letchworth), Sir Edgar Bonham-Carter, and the first Lord Harmsworth, who did their best to keep the garden-city concept in the public view and hearing (so far as the hammers permitted) with the aid now of two physical demonstrations of its practicability and attractiveness.

THE CHAMBERLAIN AND MARLEY COMMITTEES

Thus some impact on opinion was maintained. In these inter-war years two Government committees, to which the Association and the garden city companies gave evidence, studied the problem of urban concentration and strongly endorsed the garden city principle.

The Committee on Unhealthy Areas, with Neville Chamberlain as Chairman and R. L. Reiss as a member, made a notable advance in thought by recommending the restriction of factory industry in the London area, along with the movement of some employment and persons to garden cities (in the correct sense) where the inhabitants

could live 'close to their work in the best possible conditions'.¹ Though nothing came of this at the time, it was the first official contemplation in Britain² of the idea that control of the location of employment is the key to the redistribution of population. There is little doubt that the evidence to this committee was the origin of Chamberlain's interest in urban decentralization and the garden city idea, manifested in succeeding years by many speeches, and in 1938 (when he was Prime Minister) by the setting up of the Barlow Royal Commission.

In 1935 a Departmental Committee under Lord Marley's chairmanship, of which Sir Theodore Chambers (then Chairman of Welwyn Garden City Ltd) was a member, again recommended the governmental encouragement of the building of new towns on the garden city model. Its report also proposed the establishment of a Planning Board to promote by restrictions, facilities and inducements a better distribution of industry.³ No immediate action resulted, but the idea was now in the political air, and began to be discussed and even commended in responsible newspapers.

THE BARLOW ROYAL COMMISSION

In 1936 the Report of Sir Malcolm Stewart as Commissioner for the Special Areas (regions of high unemployment) aroused political interest by a forceful reiteration of the 1920 suggestion that London should be placed 'out of bounds' for new factory construction (with certain exemptions)—for the sake of the regions suffering from industrial decline. In the same year the Association complemented Sir Malcolm Stewart's proposal with an equally forceful renewal of its own campaign, arguing the necessity of dispersal from the other angle—for the sake of London and other regions suffering from industrial plethora and thrombosis. F. J. Osborn had become honorary secretary, and the full-time services were engaged of a young Scotsman, Gilbert McAllister (later M.P.) who had a great enthusiasm for the new town idea, and proved one of its most effective exponents in books and articles as well as in Parliament. New supporters of influence came in, and the decisive phase of the Association's long struggle for a national new towns policy began. Gilbert McAllister and his wife, Elizabeth McAllister, successively organized the activities of the Association from 1937 to 1947, and the influence of its campaign during that period owes a great deal to their energy and devotion.

By the late 1930s Welwyn Garden City had become a visible entity, and its industrial growth, social liveliness, and outstanding quality of design had made a worldwide impression, comparable with, even exceeding, that made by the first garden city two decades earlier. Probably

¹*Report of the Unhealthy Areas Committee*. HMSO, London, 1920.

²It was not of course an entirely new idea. The Report of the New York Committee on Congestion (1911) proposed such an embargo; and in Italy a decree of 1927 prohibited the starting of factories employing over 100 workers in any town of over 100,000 inhabitants. See F. J. Osborn: 'Industry and Planning': *Journal of Town Planning Institute*, July 1932.

³*Report of Committee on Garden Cities and Satellite Towns*, HMSO, London, 1934.

it was the combination of Welwyn's prestige, the pressure of the Association, and the ideas in the Marley and Malcolm Stewart reports, as well as his own report of 1920, that stirred Neville Chamberlain, on becoming Prime Minister in the Conservative Government in 1938, to appoint the Royal Commission, under the chairmanship of Sir Anderson Montague-Barlow, Bt, whose report in 1940 raised the problem of large towns for the first time to the status of a major public issue.¹

The published evidence to the Barlow Royal Commission, official and unofficial, contains a massive collection of facts and figures about British towns up to the time; of permanent value to students of urban history and structure and of contemporary thought (and lack of thought) about the advantages and disadvantages of large towns. The printed evidence of the Association was well documented as things went in those simple days (before 'horse-head equations' were considered indispensable in social-economic argument) and, with the supplementary verbal evidence, is known to have had much influence on the Commission. The secret history of the struggle within the Commission for a definite national policy, of which the Association had glimpses, would be of fascinating interest if it could be written. All we can say here is that supporters of the new towns policy owe a special debt to two clear-thinking and resolute members, Sir Patrick Abercrombie and Mrs. Lionel Hitchens, without whose efforts the recommendations in the majority report would have been far less definite than they were. These two also added great force to its total effect by the minority report that they signed along with H. H. Elvin.

The majority report contained a most impressive study of the disadvantages of excessively large urban agglomerations, fully confirming the contentions of the Association, while, no doubt to conciliate hesitant members, making the most of the countervailing advantages of substantial town size. In our view it was too hopeful about the possibilities of overcoming the disadvantages of 'million cities' by better planning, but it was unequivocal about the balance of disadvantages in multi-million cities like London, and about the extreme urgency of preventing their further growth.

Among the considerations that influenced the Commission, the social and economic drawbacks of large towns—overcrowding, ill-health, shortage of recreational space, noise and smoke, long journeys to work, traffic congestion, and so on—were prominent. The injurious effects of suburban sprawl on agriculture and countryside amenities, on which much evidence had been given, were also regarded as serious. And as the shadow of Hitler, Munich and a possible coming war loomed heavily over the nation at the time, the strategical danger of having so large a proportion of Britain's population and industry massed in large agglomerations was the subject of a grave chapter in the report. All these considerations told in the same direction—towards the imperative neces-

¹Royal Commission on the Geographical Distribution of the Industrial Population. Report and Evidence. HMSO, London, 1940.

sity of limiting by some means great-city congestion and further growth.

When it came to proposals for a policy, however, the Commission was badly inhibited by internal differences that could not be resolved. The famous 'Nine Conclusions', unanimously adopted by the 13 members, agreed that 'in view of the nature and urgency of the problems' national action was necessary, and proposed the setting up of a 'central authority' whose activities should transcend those of any existing government department. The 'objectives' should include redevelopment of congested urban areas and decentralization and dispersal both of industries and industrial population. But the Commission left open the question whether the central authority should be executive or merely advisory, what congested urban areas should be dealt with, and whether and how far decentralization or dispersal, 'if found desirable', should be 'encouraged or developed' in garden cities, garden suburbs, satellite towns, trading estates, existing small towns or regional centres, or by other 'appropriate methods'.

In effect this was a promising programme for further study and research, with tentative suggestions as to the lines that might be pursued. It was an attractive shopping list, rather than a purchasing order. Yet it was conspicuously marked 'urgent'. The Association, while thrilled by the text of the report, was at first not at all sure that the conclusions had crossed the Rubicon, and hesitated whether to give it a lukewarm welcome as moral support for sound principles, or to hail it as a great historical manifesto.

The minority report, however, was much more definite, and obviously more consistent with the balance of considerations expressed in the text of the majority report. It went straight out for a new Ministry to plan the location of industry on a national scale, to have definite powers—powers to impose restrictions in some areas, to provide encouragements in others, and to promote the building of 'garden cities and satellite towns' and the expansion with industry of small towns and regional centres. Starting with these powers, it concluded, the new Ministry should report urgently as to what further powers it required for the redevelopment of congested town areas and for the policy of decentralization and dispersal.

Taking together the majority and minority reports, the 'dissentient memorandum' on the defects of planning law and administration by Abercrombie, and the 'reservations' by three members of the majority, which proposed machinery for the restriction and encouragement of industrial location for other regions as well as London, the Association decided that, if the Barlow Report as a whole were interpreted as a triumphant vindication of the Association's own policy, it could be made so in fact. And this bold judgment turned out to be correct. The ex-chairman, *functus officio*, fell in with this interpretation, joined the Association, and in cordial co-operation with it took an active part in the campaign for a new Ministry with the necessary powers for cen-

tral redevelopment, dispersal, green belts, and new towns. In effect he retrospectively endorsed the minority report. He was in due course deservedly (but sad to say posthumously) awarded the Ebenezer Howard Memorial Medal by the Association for his distinguished contribution to the garden city movement. The Barlow Report did in the event prove the historic turning point in the governmental concern with urban development.

THE WAR AND NATIONAL PLANNING

The outbreak of war in September 1939 pushed aside propaganda and discussion on long-term issues. Building development was checked, and much of it diverted to purposes ancillary to war needs. Many planners and other governmental officials were drawn into the armed forces or emergency functions. Large sections of the civilian population had to add to their work in factories, shops and offices service in the Home Guard and Civil Defence. Voluntary societies suspended or re-directed their activities. The Town and Country Planning Association closed its London office and carried on in one room in Welwyn Garden City, with a one-person staff—Miss Elizabeth Baldwin, the business secretary—who to relieve its budget took a part-time job in a local office.

In view of the tragic circumstances of the time—the call-up, the departure of troops to Europe, the vast evacuation of children and their mothers from the big cities to country towns and villages, the fall of Britain's only co-belligerent, France, bombing from the air, losses of ships by submarine attacks, food shortages and rationing, and intense anxiety about personal and even national survival—it is not surprising that the Barlow Report, published in January 1940, went almost unnoticed onto the shelf. What is remarkable is the speed with which it came off the shelf. As a result of the great damage done to towns by the bombs, an unexpected popular interest arose as to the form their reconstruction after the war might take. Across the extensive areas of destruction and rubble, which it was the Government's policy to clear promptly and convert into melancholy vacant sites, city dwellers saw new vistas. After the first shock they were astonished at the amount of sky that existed—the unaccustomed brightness of the devastated scene. Their sense of the permanence and unalterability of the built-up background dissolved; the 'urban blinkers' were dislodged from many eyes. What would replace the former crowded buildings if and when we won the war? Might we not have much better homes and work-places and retain this new sense of light and openness?

Spontaneously reconstruction and town planning became a popular theme of discussion. There were more opportunities for this than might be assumed. Though people were working at enormous pressure, war conditions produced long hours of boring inactivity—in air-raid posts and shelters, Army and Air Force training camps, Home Guard watches, even in factories where inevitable delays in supplies caused 'waiting time'. In such intervals it was natural to discuss, among other

things, the after-war future, and there was a popular demand for talks and lectures from speakers who had ideas on the subject. It is to the credit of the Government that they saw the value of this in upholding morale: the hope of a Better Britain helped to sustain the desperate determination to fight and work for victory.

The Government not only encouraged popular discussion of post-war reconstruction, but even devoted a modicum of ministerial and civil service attention to it. As early as October 1940 Lord Reith, then Minister of Works and Buildings, was personally charged with the responsibility of studying and reporting to the Cabinet on the methods and machinery for physical reconstruction in town and country after the war. A man of extraordinary dynamism, nationally well known as the former head of the British Broadcasting Corporation, he got to work with characteristic speed. The Barlow Commission's report was retrieved and examined, and proved to be a most opportune textbook on the sort of policy needed for the occasion. Its timeliness was the first piece of historical good luck the new towns movement had had. Lord Reith, using it as his basis, called into consultation leading persons interested in physical planning, including members of the Association, and by February 1941 he had obtained from the Cabinet acceptance of the principle of a national authority to pursue a positive policy for agriculture, industrial development and transport, with attention to the unordered growth of congested towns and the indiscriminate sprawl over the countryside. This in itself was perhaps a safe enough decision, leaving plenty of escape holes for future choice; but it was a step in the right direction. New legislation was foreshadowed for these objectives.

BEGINNINGS OF A GOVERNMENT POLICY

In the meantime (January 1941) an expert committee had been appointed to study the problem of compensation and betterment in planning, as had been recommended by the Barlow Commission. And in July 1941 the Cabinet accepted this committee's interim recommendations¹ that for purposes of public acquisition or control of land a 'ceiling' value as at March 1939 should be fixed, that the central planning authority should at once be set up to control all development, that 'reconstruction areas' should be defined, and that until proper schemes were prepared rebuilding in these areas should not be permitted except under licence.

At the same date Lord Reith was authorized to take steps to work out a national planning policy, within the framework of the general study of post-war problems then under the charge of the Minister without Portfolio, Arthur Greenwood, M.P. A Council of Ministers was set up, consisting of Lord Reith as chairman, the Secretary of State for Scotland, and the Minister of Health.

And in February 1942 came the Government's more definite decision:

¹Expert Committee on Compensation and Betterment (the Uthwatt Committee): *Interim Report*. Cmd. 6291. HMSO, 1941.

to establish forthwith a central planning authority—not a board or an advisory body, but a ministry. The Ministry of Works and Buildings was to become the Ministry of Works and Planning and to take over for England and Wales the town and country planning functions of the Ministry of Health. The Secretary of State for Scotland would retain the planning functions for Scotland. There were to be arrangements for co-ordination by a Committee of Ministers and a Committee of Senior Officials representing certain other departments.

This was accompanied by a highly important, though still very cautious, statement that the Government would consider the steps that should be taken towards the recommendation of the Barlow Report for the redevelopment of congested urban areas, decentralisation or dispersal therefrom of industries and population, and encouragement of a reasonable balance and diversification of industry throughout the regions of Great Britain. In terms this was a decision to consider setting up an authority to consider what ought to be done—not even a shopping list, but a note to consider preparing one. But the circumstances of the moment must be borne in mind. It did mean acceptance of the idea of a national planning authority of some kind: the one thing on which all schools of planners were agreed. The Government, however, added that care would be taken to avoid interference with the aim of the highest possible standard of living, the waste of existing capital equipment, and diversion of productive agricultural land to other purposes if less productive land was available. These reservations are significant as deriving from differences of accent then already apparent in planning circles, which were later to blow up into fierce controversies.

A NEW MINISTRY AND THE BATTLE OF IDEAS

At this stage the shape of a post-war policy was still vague, and it could not be assumed that new towns would figure in it. Lord Reith had consulted many people with views on planning, and had set up a Consultative Panel on Physical Reconstruction which had made a start on the working out of certain details of policy. He had visited a number of bombed cities and encouraged the local authorities 'to plan boldly'. The work done by the advisers he had got together and by the civil servants in his department—notably H. G. (now Sir Graham) Vincent as the under-secretary concerned with planning—and the successive decisions he had extracted from the Cabinet, intensified the already lively public and press interest and the expectations that a strong post-war policy would be pursued.

It is difficult to assess the weight of the various influences in the public discussion, and within the Government itself, during this period. The Conferences of the TCPA in 1941 and 1942, the debates in the House of Lords initiated by Viscount Samuel and others, the 1940 Council

formed by Lord Balfour of Burleigh, the BBC talks and debates (in which TCPA members were often heard) and the publications of various specialized groups, all contributed. Inside the Government Arthur Greenwood exercised important influence; and from Lord Reith's account it is evident that Sir John Anderson (later Lord Waverley), then Lord President of the Council, was in constant touch with all the Ministers concerned. All these we have named seem to have been in favour of the 'national planning authority' proposed by the Barlow Commission. But whether any of them at that time definitely favoured the governmental creation of new towns is doubtful: some of them seem to have regarded it at most as just an interesting possibility.

To everybody's astonishment, a day or two after the Government's decision to set up a national planning ministry, Lord Reith was dismissed from office by the Prime Minister (Winston Churchill). He was replaced as Minister of Works and Planning by the late (first) Lord Portal, who in his short period of office showed no particular interest in post-war planning policy. However, Henry G. Strauss (now Lord Conesford) who was then a member of the TCPA executive committee and keenly interested in the aesthetic aspect of planning, was appointed an additional Parliamentary Secretary to deal specially with planning functions. The work of preparing legislation on the lines of the Government's decision proceeded.

Exactly why Lord Reith was dismissed remains something of a mystery even after a study of his account of the affair in his extraordinarily candid autobiography.¹ There were certainly tensions between him and other Ministers about the allocation of functions in the reconstruction policy: and our own view is that Lord Reith himself did not fully appreciate that town and country planning would be, if given its due status, a big enough subject to engage the full-time activity of a Minister of the highest rank. If he had shared our own estimate of the importance of planning and physical reconstruction, and had been prepared to concentrate on it as he had concentrated on the creation of the BBC, his own and national history might have taken a happier course; but admittedly this is a vain speculation. Lord Reith must be accorded credit for a remarkable contribution to the advance of planning in getting the main Barlow recommendations accepted in the short space of 14 months. Years later, as chairman of the New Towns Committee, he was to make another extremely valuable contribution.

When in 1943 the Ministry of Town and Country Planning was at last established, the first Minister was W. S. Morrison (afterwards Speaker of the House of Commons, and as Viscount Dunrossil, for a few months before his death, Governor-General of Australia), who proceeded to build loyally on the foundations laid. Under him the important Town and Country Planning Act of 1944 was passed, giving strong new powers for the acquisition of land in bombed and obsolescent urban areas and for comprehensive redevelopment. All development was

¹Lord Reith: *Into the Wind*. Hodder and Stoughton, 1949.

placed under interim planning control, and thus the stage was set for a national policy when the Government could find time and will to decide upon it. New towns were still not in sight. And the controversies then in full swing made their ultimate appearance seem doubtful.

WAR-TIME CONFERENCES AND DISCUSSION

During the Reith-Morrison period (1940-45) many societies and persons entered into the discussion of post-war planning and physical reconstruction, and some of these were far from enthusiastic about the creation of new towns. The TCPA made many endeavours to unite the various schools of thought on a practicable and balanced policy. As early as the spring of 1941 it arranged a widely representative conference at Oxford, attended by distinguished leaders of differing views and interests and delegations of all types of local authorities.¹ Among the speakers at this conference were Sir Patrick Abercrombie, Sir A. Montague-Barlow, Lord Brocket (Chairman of the Land Union), (Sir) Donald E. E. Gibson (then City Architect of Coventry), Sir Herbert Manzoni (City Engineer of Birmingham), F. J. Osborn, (Sir) George Pepler, Professor W. A. Robson, Viscount Samuel, Lord Justice Scott, Lewis (now Lord) Silkin, Sir George Stapledon, Lord Simon of Wythenshawe, and Dr. Dudley Stamp. A stimulating discussion took place, but apart from the general acceptance of the Nine Points of the Barlow Report, it cannot be said that a common policy emerged. The published report did however prove a clarifying element in the subsequent public controversies.

In 1941 also the Association began the issue of a series of shilling booklets by competent writers, dealing with aspects of the national problem, and these were widely circulated.²

A second conference at Cambridge in 1942 specialised on the agricultural and rural aspects of planning and industrial decentralization,³ and this again brought together a highly expert assembly of speakers and delegates—among whom were Professor G. M. Trevelyan, OM, Sir Daniel Hall, L. F. Easterbrook, Sir Malcolm Stewart, Professor Sargant Florence, Professors A. W. Ashby and C. S. Orwin, and Dr. Thomas Sharp. The evidence of the TCPA to the Scott Committee, a constructive effort to reconcile the urban and rural accents, was among the papers for this conference. But again general agreement on the major issues could not be attained.

A definite advance in this direction was however achieved by the TCPA in 1941 when its 'National Planning Basis' was accepted by the Royal Institute of British Architects, the National Council of Social Service, and the National Playing Fields Association.⁴ This still stands as a useful expression of the consensus of responsible opinion on which national policy was ultimately based.

¹*Replanning Britain: Report of the Oxford Conference of the TCPA*, Faber, 1941.

²*Rebuilding Britain Series*. Faber, 1941-42.

³*Industry and Rural Life: Report of the Cambridge Conference*. Faber, 1942.

⁴See page 32 (at end of chapter).

THE UTHWATT AND SCOTT REPORTS

We need mention only briefly the reports in 1942 of the two important committees set up during Lord Reith's period. The Uthwatt Report on the relationship between land-use control and land values stands as a classic among blue-books.¹ A brilliant analysis of the problem of equating compensation for private losses of value with the collection of part of the private gains of value is followed by a study of the possible solutions. Though the solution recommended was not adopted, the report greatly influenced opinion and led in 1947 to legislation that made possible a large scale reservation of green belts and agricultural land, with compensation from national funds. The provisions in the 1947 Act for the collection of gains in value were however subsequently repealed, and the problem of the equation or partial equation of compensation and betterment is at the time of writing unsolved.

The Scott Report² contains a comprehensive assembly of proposals for the protection and advance of the interests of agriculture and the countryside. It accepts the Barlow thesis in principle, but its attitude to the issue of decentralization or dispersal is admonitory, emphasizing the importance of keeping any new urban developments compact and limiting them to relatively unproductive land. Certain paragraphs disquieted the TCPA by suggesting a reversion to high-density flat-building in existing towns to reduce the draft on agricultural land. When the Association expressed its alarm, Lord Justice Scott, as ex-chairman, obtained letters from all the members of the committee disclaiming any intention to thwart the new towns policy; and after a meeting between representatives of both bodies the TCPA accepted the assurances, swallowed its misgivings and publicly approved the report. The printed paragraphs, however, remain on record, and the harm done by them to countryside opinion on the new towns policy has, we regret to say, survived the effect of the personal disclaimer by members of the committee.

THE FIRST ABERCROMBIE PLAN FOR LONDON

The rising public interest in planning was given a great stimulus by the publication in 1943 of the County of London Plan.³ This was prepared for the London County Council, at the instance of Lord Reith when Minister of Works, under the direction of J. H. Forshaw (then the county architect) and Sir Patrick Abercrombie. In many ways an advance on previous great-city plans, it is of special importance to our subject because its careful study of the numbers of persons who could be satisfactorily rehoused at given densities in reconstruction provided a realistic measure of the 'overspill' of population and employment that would have to be accommodated outside the county. Chapter Two, on 'Decentralization' contains the following significant statements:

¹*Expert Committee on Compensation and Betterment. Final Report.* HMSO, 1942.

²*Committee on Utilization of Land in Rural Areas: Report.* HMSO, 1942.

³*County of London Plan:* prepared for the L.C.C. by J. H. Forshaw and Patrick Abercrombie. Macmillan, 1943.

'The ideal situation for people to live in is within reasonable distance of their work but not in such close proximity that their living conditions are prejudiced by it; this ideal can be closely realised when planning a new town of limited size in which the time, money and energy spent in means of locomotion are reduced to a minimum. But an approximation to the ideal becomes increasingly difficult in existing large towns or groups of towns. This is caused by many factors such as the immobility of certain of the industries, the impossibility of obtaining satisfactory living conditions near-by, the variability of occupation within the same family or the change of work-place after a home has been purchased . . .' (para. 113).

'Both sides of the subject require careful handling; in the aspect of living quarters, the personal feelings and idiosyncracies of human beings must be given the fullest consideration; in the aspect of industry the equally delicate susceptibilities of economics are involved . . .' (para. 114).

'To produce an ideal scheme of decentralization, the numbers of persons for living and working quarters should balance; this, of course, can never happen . . . Nevertheless, a good deal of sorting out will gradually take place if a serious attempt is made to equate residential and industrial removal . . .' (para. 117).

Thus the authors of this Plan saw clearly that a considerable displacement of persons and employment would be necessary for any decent reconstruction:

'It is desirable to make the industrial boroughs of London so attractive that people whose work is there will not be forced out to distant suburbs for pleasant houses, gardens, open spaces, schools with playing fields and safe shopping centres: on the other hand, the people whom it is necessary to decentralize, in order to produce these satisfactory conditions, should so far as possible have a choice of work near at hand; the aim should be to avoid their being housed in distant dormitories, yet constrained to rush back to the old work-a-day haunts. The facts of the dilemma are plain, but their consequences are not always grasped. Some have been heard to ask why it is not possible for people to live in houses with large gardens, near their central work, and at the same time for the population of the borough to remain at its pre-1938 level. Others, a little more realistic, would cram everyone into lofty close-packed tenements whose high architectural qualities might mask their social deficiencies, and would also keep factories within the town, thus avoiding any further encroachment upon the countryside. Both these points of view ignore two inescapable facts: the first, that to obtain attractive living conditions a much lower density in the industrial boroughs of London must be secured, i.e. a large population must be decentralized, and so far as possible a corresponding amount of industry; the second, that the exodus of people and industry was already taking place before the war. The decentralization has been happening in an unplanned way; the boroughs see their population dwindling, as their best ele-

ments, especially the young married folk, leave the old surroundings, which are not benefited by this reduction except in strictly limited patches of new tenements. What we now propose is to anticipate this loss, to enhance it by means of a bold reduction and to produce a really satisfactory environment by wholesale rebuilding made possible by war damage. . . . The number we estimate it would be necessary to remove from the congested parts of London to secure the conditions postulated in our Plan is between five and six hundred thousand people.' (para. 21)

THE GREATER LONDON PLAN OF 1944

Bold as this planned reduction seemed, it was shown to be necessary on the standards of maximum rehousing density considered permissible in the boroughs to be decongested. These standards included 200 persons an acre for extensive central areas, and a maximum of 136 persons an acre in 14 of the industrial boroughs. These were certainly not generous standards. A density of 200 an acre means that all persons must live in high flats, and 136 an acre necessitates at least 75% and probably 80% in high flats. Such standards, as the TCPA at once pointed out, hardly seemed likely 'to make the industrial boroughs of London so attractive' as to hold people contentedly within them. Abercrombie was uneasy about them himself. He had had to compromise with strong influences in LCC circles for retaining as much population as possible. In his Greater London Plan of 1944¹ he suggested an alternative maximum density of 100 persons an acre, which would permit of 50 per cent. of terrace houses of 2 or 3 storeys, but would involve a displacement of 200,000 more persons from the county (800,000 instead of 600,000), and from the county and the inner ring boroughs together a total decentralization of nearly 1¼ million. It is understandable that in submitting these staggering figures he should have had doubts of his own realism. Nevertheless they were imposed by the logic of the situation.

Whereas the County of London Plan of 1943 confined its detailed proposals to the area within the county, and gave a measure of the displacement of population that rebuilding on certain standards of density would involve, the Greater London Plan of 1944 made a further historic advance by definite proposals for the location of the 'overspill' of population and a corresponding quantum of industrial employment. Of the 1¼ million to be displaced 125,000 were to be housed in 'satellite' suburbs on the outskirts of the conurbation, about 260,000 in additions to existing towns in the Outer Country Ring (beyond a Green Belt to be reserved), another 270,000 or so in towns at a distance of 40 or 50 miles from the centre, and nearly half a million in ten new towns for which sites were suggested. This left about 100,000 persons to be rehoused right outside the area of metropolitan influence.

A paragraph in Abercrombie's 'Personal Foreword' to the Plan,

¹Patrick Abercrombie: *Greater London Plan* 1944. HMSO, 1945.

following his tribute to his colleagues, is worth quoting as a reminder of the mood of the time:

'The Plan thus prepared, with this multifarious guidance and collaboration, is now completed, so far as it is possible to say that the stage of finality can be reached by a living organism. There is now a chance—and a similar one may not occur again—of getting the main features of this programme of redistributed population and work carried through rapidly and effectively, thereby reducing overcrowding and locating industry in conjunction. The difficulties in normal times of moving people and industry are rightly stressed; but people and industry will go where accommodation is made available. Moreover, the war has made migration a familiar habit. Give a man and his wife a first-rate house, a community, and occupation of various kinds reasonably near at hand, with a regional framework which enables them to move freely and safely about, to see their friends and enjoy the advantages of London; add to these a wide freedom of choice, and they will not grumble in the years immediately following the war. The industrialist, if he is asked whether he is prepared to submit to the guidance of a Government official, will probably protest. But if he is offered a choice of sites, with every modern facility (including labour) provided, and in addition a licence to build and access to building materials and labour, he will jump at the chance to get started as quickly as possible. Moreover, if Trading Estates are laid out ready for hire and actually a certain amount of building is done for small enterprises, these sites and factories will be eagerly taken up: always, of course, provided they are sited in the most suitable positions Courage is needed to seize the moment when it arrives and to make a resolute start.' (pp. v, vi)

The Greater London Plan of 1944 excelled in scope the County Plan of 1943 as much as that Plan had excelled all its predecessors. It converted the concept of metropolitan redevelopment on human standards, and decentralization, green belts, new towns and country-town expansions, into a clear and concrete practical proposition. Abercrombie proved splendidly adequate to the unique opportunity afforded by the war-time circumstances and the long preceding processes of thought and advocacy.

It should not be forgotten, however, that among the prior work he and his team were able to build on, was that of the Greater London Regional Planning Committee, a representative body of local authorities set up by Neville Chamberlain as Minister of Health in 1927, with Raymond Unwin as technical adviser. This Committee's second report of 1933 includes an appendix in which proposals are made for the development of new towns with governmental encouragement, and means are suggested for dealing with the practical problems, though adequate powers were not then in sight. It is a reminder of the small importance attached to planning at that period that the budget of this Regional Committee was less than £4,000 a year, and that in 1933 the LCC, pleading 'financial stringency', reduced its contribution to £500

a year, and Unwin accepted a reduction of his fee and undertook to carry on the whole of the work, and to provide an office, for £1,700 a year. (It was in that year that Unwin, world-famous as a planner, whose advice was in great demand in the USA and elsewhere abroad, received the honour of Knighthood.)

We rank Unwin and Abercrombie, both architects by profession, among the greatest contributors to modern planning thought and practice. They were exceptional in combining high aesthetic sensitivity with an unfailing sympathy for the desires and aspirations of the common man in housing and living conditions, a firm respect for economic and other practical considerations, and above all an ability to marshal a vast assemblage of facts, statistics and considerations supplied by experts in many fields into a coherent picture and a practicable policy.

Though it came later, mention should be made here of the Advisory Committee for London Regional Planning set up (1945-50) to work out an outline plan for the outer area of the region pursuant to the Greater London Plan of 1944. Under the chairmanship of Clement Davies, MP, and with the advice of a technical committee directed by F. Longstreth Thompson (then planner to the Essex County Council) this body, representing over 140 local authorities, agreed on the location of the London 'overspill' as between towns and county districts and specified 'ultimate populations' for each. Its target figures have since been modified. But its work was of historic importance as the first essay in a quantitative regional pattern of town and country on which local plans could be prepared.

THE PARTY RECONSTRUCTION COMMITTEES

During the war the United Kingdom was ruled by a Coalition Government in which all three democratic parties were represented; but the parties continued their separate organizations, and each set up a number of post-war reconstruction committees, with a specialised group to study the problems of post-war housing and planning and formulate a party policy thereon. The TCPA, which had from its birth maintained a non-party, or all-parties, composition and attitude, was called upon for advice and assistance in these studies. Some of its members in fact served on each of the party committees.¹ All endorsed in principle the main proposals of the Barlow Report already accepted by the (Coalition) Government, but within each there were at the outset much the same differences of accent as in the public discussion at large. However, after much argument, all three parties, with some difference of emphasis, included planned central redevelopment, dispersal, green belts, and new towns in their reconstruction programmes. Valuable influence in this direction was exerted by members and others in close contact with the TCPA: on the Conservative committee by Lord Balfour of Burleigh

¹The Communist Party of Great Britain did not approach the Association for advice, though one of its well-known members, the Rev. Hewlett Johnson, Dean of Canterbury, was a member of its Council at the time. This party, however, received only 100,000 of the 25,000,000 votes cast at the 1945 Election.

and John A. F. Watson, on the Liberal Committee by B. Seebohm Rowntree, and on the Labour Party Committee, of which Lewis (Lord) Silkin was chairman, by the Rev. Charles Jenkinson (of Leeds), Lady Simon (of Wythenshawe), (Sir) Richard Coppock, and others. The degree of agreement reached proved of decisive importance when in 1945 legislation for new towns was introduced. This was one of the TCPA'S most successful efforts in political lobbying.

OTHER INFLUENCES ON POST-WAR POLICY

We have stressed the part of the TCPA in the war-time discussions because it was the only organization that placed new towns in the forefront of a comprehensive and balanced planning policy. In this concentration we necessarily fail to convey a proper impression of the variety and complexity of the influences impinging on the public mind. In the kingdom of planning, as of heaven, are many mansions ('dwelling-places' is the word in the New English Bible) and in tracing the evolution of the new towns policy we have to pass by some very important factors without due notice. Many other bodies and Government committees paid attention to particular aspects of policy related to planning—the design of dwellings, the organization and finance of city redevelopment, the administration of planning control, communications and traffic, public services, parks and open spaces, national parks and access to the countryside, neighbourhood planning, village planning, outdoor advertising, architectural control, and so on. Ideas were put forward in conferences, manifestos and exhibitions by such organizations as the Town Planning Institute, the National Housing and Town Planning Council, the Council for the Preservation of Rural England, the Housing Centre, the Royal Institute of British Architects and other groups of architects, the Surveyors Institution, the Association for Planning and Regional Reconstruction, Nuffield College, the Commons, Open Spaces and Footpaths Preservation Society, the Ramblers' Association, P.E.P. (Political and Economic Planning), the London Society, and the associations of local authorities.

A group that calls for mention is the Hundred New Towns Association, started in 1933 by A. Trystan Edwards, FRIBA, to advocate new towns with high-density terrace housing as an alternative to multi-storey flats. This was a variant of the 1918 programme of the New Townsmen, of which Mr. Edwards seemed unconscious. Despite his persuasive presentation of the case its appeal was limited, not only by the unacceptable kind of housing proposed but by his combination with it of unorthodox monetary proposals of the Jersey-Market or Douglas-Credit type. Reformers are always unwise to mix the drinks they offer. Interest-free credits, if justifiable, could obviously have been used for any class of public expenditure—from roads to atom bombs—as easily as for new towns. And few people wanted to repeat in new towns, even in a modernized architectural form, the close-packed terraces and narrow streets of the old towns. Welcome as Mr. Edwards' denunciation

of the tenement-flat system was, the TCPA could not embrace the Hundred New Towns Association as a valuable ally.

THE NATIONAL PLANNING BASIS (1941)

The Town and County Planning Association works for the best planning of land use in all its aspects, including:

1. National, regional, and local guidance of the development and redevelopment of land and building and of the grouping of people, industry and business, so as to promote the wisest use of all resources in the interests of all.

2. A policy of planned dispersal from congested cities. The new urban developments required for this dispersal, by industrial changes and by the growth of towns up to their planned limits, to be guided to new towns and existing country towns suitable for expansion: such towns to be so sited as to meet the needs of industry, agriculture and business, and designed as reasonably compact units without scattered or ribbon building. All towns, new and old, to be planned with proper facilities for a good social life, health, education, culture, and recreation. Village development to follow the same principles so far as farming requirements permit.

3. The setting of such limits to the size of towns as will avoid needlessly long journeys and protect living conditions; and such standards of residential density as will ensure adequate gardens for family houses and ample open space for recreation and amenity.

4. The preservation of wide country belts around and between towns, for the sake of agriculture and to enable townspeople to have easy access to the country; and the safeguarding from wasteful development of the best food-growing land, places of landscape beauty, national parks, and coastal areas.

5. Attention to good architecture and landscape design as well as sound construction in all development. Outdoor advertising to be restricted to approved positions and controlled in character.

6. National policy in the location of industry and business (*a*) to encourage their settlement in new towns and country towns, and (*b*) to restrict their settlement where there is over-concentration or congestion. Business firms to retain freedom of choice within the unrestricted areas.

7. The financial provisions under planning law to be so administered as to place on national rather than local funds the cost of compensation incurred in applying national standards.

8. Efficient, considerate, and speedy administration of planning at national, regional, and local levels.

9. The maximum enlistment of public interest in and understanding of planning and development, nationally, regionally, and locally, to ensure that planning is in accordance with people's desires and has behind it the driving force of public opinion.

Chapter VII

LEGISLATION FOR NEW TOWNS

‘And that these things are best, if they be possible, we have sufficiently, I imagine, explained in the preceding part of our discourse.

—Sufficiently indeed.

—Now then it seems we are agreed about our legislation—that the laws we mention are best, if they could exist, but that it is difficult to get them to prevail, not, however, impossible.

—We are agreed, said he.’

—PLATO: *Republic*, Book VI (trans. H. Spens, 1763)

NEW towns did not figure conspicuously in the competition of party programmes during the first post-war General Election of 1945. As in 1918, the major accent was on promises of maximum speed and quantity in building houses. Though the three parties had accepted the policy of planned redevelopment of bombed and obsolete urban areas, and their experts had realised that decent standards in rehousing necessitated some decentralization from crowded cities, and knew there was a wistful popular interest in the idea of new towns, their election manifestos did nothing to show the connection between planning and living conditions, only vaguely apprehended by the electorate. Stout municipal councillors in all parties still wanted more population and rateable value and held that flats and suburban housing were easier and quicker to produce than new towns; architects longed for lofty towers as more ‘exciting’ to design and photograph; and countryside preservationists urged high density to ‘save land.’ Party managers could see few votes in a strong emphasis on dispersal. The Town and Country Planning Association therefore felt by no means confident that the combination of central flat-building and a great suburban explosion, comparable with that of the inter-war years, would not be repeated, whichever party won the election.

In the event the Labour Party won it, with a substantial majority, the Liberal Party was reduced to a small fraction, and Winston Churchill’s Conservative Government, which had replaced the Coalition for a few months, was succeeded by the Government of Clement (now Lord) Attlee.

Though the Labour Party had not made a feature of the dispersal policy in its election campaign, the subject had been thoroughly discussed by its reconstruction sub-committee on housing and planning under the able chairmanship of Lewis (now Lord) Silkin. A solicitor by

profession, and MP for a London constituency, Silkin had been Chairman of the Town Planning Committee of the LCC from 1940 to 1945 and was well-informed on urban problems. It is interesting now to recall that in the sub-committee's discussions he back-pedalled the desire of practically all the other members to give prominence in the programme to dispersal and new towns. This resistance may have been tactical. It was Silkin's habit later, as Minister receiving a deputation, to pour gallons of cold water on its ideas, to argue their complete impracticability—and then to act upon them; the exact opposite of the normal ministerial technique of listening patiently, expressing warm sympathy, promising careful consideration—and then doing nothing. As chairman of the Labour Party sub-committee he insisted that the emphasis must be on city rehousing, that in central districts high density would have to be accepted, and that new towns at best could only be a minor supplementary expedient. Most of the other members wanted the emphasis the other way round. The difference of accent was so strong that the majority (while in agreement with the greater part of the chairman's draft report) submitted to the Party's main reconstruction committee a separate draft of certain key paragraphs, urging that new towns be placed in the forefront of the programme. A few members, including the Rev. Chas. Jenkinson of Leeds, were so hot about this that they wanted to over-ride the chairman's view by a vote, but F. J. Osborn persuaded them that the gentlemanly strategy of an alternative draft was more appropriate in the circumstances.

What happened in the higher circles of the Party we do not know. At a solemn meeting with representatives of the majority of the sub-committee, Emanuel Shinwell, Harold Laski, and Morgan Phillips listened to their plaint, and, in a polite quasi-ministerial manner, assured the deputation that their views would have due attention. The solution adopted was politically astute. The party published Silkin's report as the official policy statement, and almost simultaneously issued for mass circulation a bright illustrated pamphlet at a lower price spotlighting new towns as a feature in future planning and housing policy.

Though on this sub-committee Silkin had not been disposed to give dispersal the priority his colleagues pressed for, he had conceded that a new town or two might be built. The TCPA therefore invited him, as Chairman of the LCC Planning Committee, to join with them in setting up a working party with technical advice from officers of the LCC as well as from members of the Association, to study the methods by which new towns could be established. To this he at once agreed, and he and F. J. Osborn made some progress in selecting persons to serve on such a body. At this moment the General Election was called, and the study project had to be postponed.

THE NEW TOWNS (REITH) COMMITTEE

Imagine the feelings of the TCPA members when, after that momentous election, the press announced that the new Minister of Town

and Country Planning was Lewis Silkin! And conceive their surprise and delight when one of the Minister's first decisions was to appoint, together with the Secretary of State for Scotland, the New Towns Committee, on which a number of the persons already suggested for the unofficial working-party were to serve!

The Committee was appointed in October 1945 with the following terms of reference:

'To consider the general questions of the establishment, development, organisation and administration that will arise in the promotion of New Towns in furtherance of a policy of planned decentralisation from congested urban areas; and in accordance therewith to suggest guiding principles on which such Towns should be established and developed as self-contained and balanced communities for work and living.'

The personnel of the Committee was well adapted to its task. Silkin persuaded Lord Reith to be its Chairman, and the other members were:

Ivor Brown, Hon. LLD, FRSI, then Editor of *The Observer*; Sir Henry Bunbury, KCB, former Comptroller and Accountant-General of the Post Office; L. J. Cadbury, Chairman of Cadbury Bros. Ltd., Director of the Bank of England, etc.; Dr. Monica Felton, Member of the LCC Planning Committee; W. H. Gaunt, CBE, former Estate Manager of First Garden City Ltd, Chairman of Hertfordshire County Planning Committee; W. H. Morgan, CBE, DSO, County Engineer of Middlesex; F. J. Osborn, Chairman, Executive Committee of TCPA, and former Estate Manager of Welwyn Garden City; Sir P. Malcolm Stewart, Bt, Chairman of London Brick Co. Ltd, and former Commissioner for the Special Areas; (Sir) Percy Thomas, OBE, then President of the Royal Institute of British Architects; John A. F. Watson, FSI, JP, Member of Central Housing Advisory Committee, and Chairman of Southwark Juvenile Court.

For Scotland there were two members: Sinclair Shaw, Advocate; and Captain J. P. Younger, CBE, DL, JP, Convenor of Clackmannan C.C.

The joint secretaries were L. F. Boden, I.L.B., of the Ministry of Town and Country Planning; and Lieut.-Colonel F. H. Budden, MC, M.Inst.T.

Sir Hugh Beaver, M.Inst.CE, and A. W. Kenyon, CBE, FRIBA, formerly Resident Architect-Planner, Welwyn Garden City, served as co-opted members on several important sub-committees.

Under Lord Reith's energetic chairmanship the New Towns Committee made in eight months an exhaustive study of the subject, called into consultation a great number of official and voluntary bodies, business organisations, and individual experts, and produced three lucid and decided reports with a maximum of content in a minimum of words. As these are easily obtainable, we do not discuss them at length. For convenience of reference, however, we reproduce their summaries on pages 349-357.

The speed and efficiency with which the New Towns Committee

collected and digested a vast amount of detailed advice and converted it into terse and practical recommendations was largely due to the skill of Lord Reith as chairman. He had at that time no knowledge of town-building. Two of the members (Gaunt and Osborn) had had experience in developing the garden cities of Letchworth and Welwyn, and A. W. Kenyon had been for many years resident architect of Welwyn. But nothing that these conceivably prepossessed members advised was accepted on their say-so. Every element of policy and practice, of methods and standards, was studied *ab initio*, and examined in the light of the views of the bodies and persons concerned with the relevant aspect of urban affairs, from religion to finance, from family life to art, from drainage to landscaping, from work to leisure, from pubs to universities—in short, from A to Z. Much of the exploratory work and consultations with representative bodies was devolved to sub-committees, but tentative conclusions had always to run the gauntlet of debate in the full committee. The triumph of Lord Reith's chairmanship is that without any fluffing of issues he obtained in the end unanimous recommendations, with an admission of a difference of judgment on only one point.

This difference is to be found in paragraphs 82 to 86 of the Second Interim Report, and concerns the ownership and administration of a new town estate after completion. We refer to this in a later chapter.

An interesting thing is the decided preference of the members of the committee, and of almost all the organisations they consulted, for the governmentally-appointed development corporation as the agency for new-town building, as against the alternatives of their building by local authorities, authorised (non-profit) associations, or commercial firms. F. J. Osborn, as chairman of a sub-committee, strenuously tested this preference by putting up the case for a variety of agencies, and suggesting to witnesses from all the associations of local authorities, of builders and contractors, of financial institutions, and of building societies that they should put in a claim for bodies of the classes they represented to experiment as new-town agencies. Almost unanimously they replied firmly: 'No, thank you! This is a job for a Government corporation.' The exceptions were the Rural District Councils Association, who saw their type of authority as a suitable agency, and three individual building and contracting firms, who said they would be glad to form non-profit or limited-profit associations, to accept Government approval of plans, and to build complete towns, for the sake of a normal return on the constructional work. (One well-known building firm, Richard Costain Ltd., did in fact make a specific proposal for an undertaking years later, but its scheme was rejected because the site proposed, in Kent, was said to be of high agricultural value.) While there can be no doubt that the Government corporation is in most cases the appropriate type of agency, we have some regret that so far other types have not had the opportunity to show what they could do. No doctrinal impulse stirs us here; no bias except against organizational rigidity. We feel that if Britain could devise some reliable form of free-enterprise limited-

profit agency as an additional means for developing new towns, this might not only speed up our own progress but also give a lead to other countries more distrustful of government initiative. The history of Letchworth Garden City, however, shows the difficulty of making sufficiently strong safeguards for the public interest where the whole site of a town is in single private ownership.

THE NEW TOWNS ACT, 1946

To what extent events in history are determined by a concatenation of circumstances, and to what extent by the thought and action of individual persons, is always difficult to evaluate. Our observation of the course of urban development in the present century compels us to recognise that the presence or absence in key positions of personalities possessed by constructive ideas and resolute in purpose can have prodigious influence. Futile as it now is, we are driven to a bitter regret at the historical ill-luck of humanity in this field. If for instance in the 18th century or earlier some imaginative, powerful and adequately clever statesman, in Britain or elsewhere in Europe, had detected and specially attended to the relationship between the size and distribution of towns and their internal quality the whole history of modern urban civilization might well have been quite different. Elizabeth I and the Stuart and Commonwealth Governments failed, it is true, in rather primitive attempts to limit London; but if by chance there had appeared even in their times, or a bit later, a statesman combining the interests and intelligence of Sir Thomas More and the dynamic authority of Napoleon or Frederick the Great, a pattern might have been set and a system of law evolved that would have avoided or immensely lessened the major evils of the first Industrial Revolution and its successors.

As it turned out, the conception of the limitation of the size of towns, often enough mooted by thinkers and writers, had to wait for the mild, politically powerless, but indefatigably persuasive Howard, and the resolute and capable Neville (with his manufacturing associates), for experimental application, on a minute scale and at a sadly slow speed. And for the beginnings of its political generalization it had to wait for Howard's New Townsmen and Unwin and Abercrombie—whose emergence was no more a historical necessity than was the non-emergence of a better-placed personality or personalities in earlier centuries.

Lamentably late and meagre as the current first essays in the political guidance of the distribution of urban settlements have been in relation to the social and economic needs, they would in our opinion have been even later and smaller but for the strong line taken by Lewis (Lord) Silkin as Minister of Town and Country Planning in 1945-7. Foundations had of course been laid for him. In all probability any Government coming into office at that time, in view of the previous official and party acceptance of the Barlow thesis, would have ventured on one or two new towns as a concession to the minority pressure-groups. But Silkin

did much more than that. His New Towns Act of 1946 generalized the proposal in a more thoroughgoing way than could have been expected, and together with the great Town and Country Planning Act of 1947 created a system of land-use control and a machinery for positive town construction that was completely revolutionary. The Government of which he was a member was confronted with a welter of vast and almost insuperable post-war problems; it could not as a whole possibly have given much time and thought to the complex, novel and little understood issues of urban re-development and dispersal. Far more than in normal circumstances, Silkin must have been free to act or neglect to act on his own personal studies and to assume responsibility for decisions of far-reaching importance. He would be the first to agree that he had a solid basis of good thinking, the practical demonstrations of Letchworth and Welwyn, and the constructive proposals of the Abercrombie and Reith reports, to build upon. Alexander of Macedon and Edward I of England must have had the thought and experience of advisers behind them too. But it seems to us that Silkin has a comparably high place in urban history as a statesman with the courage to come to decisions and the political ability to overcome the obstacles and to carry out a great purpose.

The New Towns Act, 1946, followed closely the recommendations of the Reith Committee, with a few variations in detail. The creation of new towns was to be entrusted to *ad hoc* development corporations (normally one for each project), appointed and financed by the Ministry of Town and Country Planning (or the Secretary of State for Scotland). Subject to the approval of the Ministry, the corporations were given ample powers to acquire sites sufficient for complete towns, to undertake all the necessary kinds of development, including the provision of houses, factories and commercial buildings, and where necessary to provide public services, to appoint and employ full-time officers and constructional workers—in fact to have all the powers that an ordinary large-scale developing landowner would possess, plus one or two ancillary powers usually exercised by local authorities. They were not however to replace the local authorities; the site of each town was to be made a separate parish or county district for which the authority would be elected in the ordinary way.

The loans advanced by the Government were to be at the ordinary rate of interest on public loans, and were to be repayable over 60 years. Subsidies on housing by the corporations were to be paid on much the same scale as to local authorities in general, though the ministries were given power to make supplementary grants.

One departure from the recommendations of the Reith report was that there was no provision for a Central Advisory Commission. This we think was unfortunate. Such a commission, if consisting of persons of relevant experience, receiving full information from all the corporations, and advising them without any power of direction or veto, would have enabled them to avoid many mistakes and some waste of money

due to lack of previous experience. In its absence the advisory function had to be assumed by the Ministry, and this, being mixed up with indispensable controls, kept the corporations rather too tightly in Ministerial and Treasury leading strings. Moreover the civil servants entrusted with this function, however able, could not possess the special 'know-how' for urban development of the character and scale contemplated.

THE FIRST GOVERNMENT NEW TOWNS

The Government's original intention was to initiate up to 20 new towns. In fact, between 1947 and 1950 fourteen were started, 12 in England and Wales and two in Scotland. Six years later, in 1956 under the Conservative Government, a third new town (Cumbernauld) was authorised for Scotland. Then there was another long interval. The Conservative Government continued without wavering the building of the towns already started, but not until 1961, despite a growing need and much pressure from the TCPA, were any further new towns commissioned; we shall discuss later the probable reasons for this delay.

Of the first fifteen new towns, described in this book, eight were intended primarily to accommodate people and employment dispersed from the London conurbation: Basildon, Bracknell, Crawley, Harlow, Hatfield, Hemel Hempstead, Stevenage, and Welwyn Garden City (the last of course already well under way). Two were to serve the same purpose for the highly congested city of Glasgow: East Kilbride and Cumbernauld. Two were designed to collect into more satisfactory urban centres, with supplementary industries, populations from scattered mining villages: Peterlee and Glenrothes. The other three were to bring more and better housing and community services to industrial settlements that were for various reasons socially and economically inadequate: Corby, Cwmbran and Newton Aycliffe. Each of the fifteen has its own chapter later in this book.

Many observers regretted that Silkin decided to take over the partially built new town of Welwyn Garden City for completion by a Government corporation. One of the reasons he gave for this was the economy and convenience of having it handled, along with the neighbouring town of Hatfield, which was to have a rather small population, by a single corporation. Another was that a corporation could be better relied upon to concentrate on dispersal of persons and industry from London than a private company, which might seek to attract them from anywhere. Our own opinion is that it would have been wiser to leave Welwyn Garden City to be completed by the company that had established it, on the condition of the restoration of some public participation in profits and increments of value. The company had produced the finest example of whole-town development in the world; it was still under brilliant direction, and in a position to obtain finance, and if allowed to finish its job it would probably have made the town more excellent still. Good as Welwyn's later development is, and good as are the other

new towns (far superior indeed to any older industrial towns), few would contend that these have, considered broadly, made as great an advance as might have been hoped on the Welwyn company's work, in planning, social character and architectural distinction. If the company had been left in being, emulation between the two types of agency might have been to the advantage of both.

BIRTH-PANGS OF THE NEW TOWNS

We do not propose to discuss at length the difficulties that the development corporations, and the Ministry, encountered in the acquisition of sites and the early stages of this huge enterprise. Much has been made of them in a very able and well-documented book by Professor Lloyd Rodwin of the Massachusetts Institute of Technology.¹ He bathed luxuriously in the subject during a long stay in England, appreciated to the full the novelty, extraordinary daring and danger of our attempt to tackle the colossal problem of urban overgrowth, revelled in the snags and resistances we encountered, and concluded in the end that we were blue-eyed enthusiasts who had had no inkling of what we were up against when we started, but, being typical unscientific Britishers, had blundered into an astonishing degree of success that our lack of foresight didn't entitle us to. He is scholarly and in intention objective, and quotes experts and idiots with delightful impartiality and great entertainment value. Yet to a participant in the events he so vividly describes he seems grossly to over-dramatize the conflicts and difficulties that arose in the creation of new towns—which have not been remarkably greater or less than those which are met in any constructive enterprise of like magnitude.

From inside, the struggle has looked quite different from Rodwin's picture. He taunts Howard and his followers for setting out on 'a false but brilliantly suggestive hypothesis', and failing to get their way for half a century for that reason. Surely the truth is that we had a completely correct hypothesis, but either through lack of propagandist genius or because we were too few and politically or academically too unimportant, did not for decades get it accepted! Time-lags of this sort are all too common. The hypothesis of the Declaration of Independence that 'All men are free and equal' hasn't even yet dominated thought and action in the Southern States; but that doesn't prove it is false. Nor does the fact that New York, Los Angeles, Shanghai, Berlin, Paris, Bombay, Johannesburg, Tokyo, Rio de Janeiro, Buenos Aires *et al.*, are still getting deeper and deeper into trouble through not adopting a policy of decongestion and dispersal tend in the least to discredit the theory of limitation of urban growth. There is more joy in Covent Garden over the few that have half repented (London, Moscow, Birmingham, Leningrad) than over the ninety and nine that persist in their senescent depravity.

Rodwin's book is a most distinguished piece of work, and should be

¹Lloyd Rodwin: *The British New Towns Policy* (1956).

read by anyone interested in new towns. But let the reader note this: descriptive scientists in any field, analysing what has happened or is happening and finding the reasons for it, are prone to be so impressed by the complex interplay they have discovered as to treat the resultant trends as laws of nature. Up to a point that may be valid. But in projecting the future a social scientist should not overlook the possibility that the forces producing a present result may change through variations of human action caused by new awarenesses or the contagion of ideas. It is very significant that, having doubted the validity of the new towns movement because in spite of it the old cities have continued to grow, as soon as the new towns unexpectedly become viable realities Rodwin begins to respect them; they become, as it were, natural phenomena worthy of scientific examination. He seems to say: 'Look, boys! something is happening here. Let's see why: it may be important!'

A man of Howard's type sees the world differently. He says: 'Look, things are going wrong! I have thought of a way to put them right. Come and join me in turning things in another direction!' The descriptive social scientist, being beautifully dispassionate, smiles disdainfully on the innovating idealist as an intelligent passer-by smiles at a child attempting to shift a ten-ton truck. But if the child organises his playmates and actually shifts the truck, he takes a rather different interest. Whether he cheers or calls a policeman depends on his prepossession as to the location of trucks.

No one who has himself taken part in the conduct of a great enterprise—as for example the establishment of a manufacturing business—will regard the difficulties met by the new town corporations as anything out of the ordinary. Naturally there was resentment and tough opposition on the part of owners of the land and buildings that had to be compulsorily acquired in assembling the sites. These were supported by private residents who had settled in pleasant countrified surroundings and did not want their Arcadia invaded by what they envisaged as a horde of urban slumdweller. On the other hand, the retail traders, and the majority of employed and employable workers already in the designated area, generally welcomed the prospect of a new town. The elected authorities were often divided in their attitude. Some members wanted more population, higher rateable value, better services, improved community facilities. In general, it must be agreed, local authorities disliked the advent of a powerful government-supported agency, concerning itself with housing and other big developments of which some were of a public-service character. Though usually one or two of the members of a development corporation were local residents and even members of the local council, the majority were not.

Thus the corporation was often regarded, as the Welwyn Company was in its early days, as 'a Hippopotamus on the Doorstep'. Tensions certainly arose from the facts of the situation. But their significance should not be exaggerated. When the leaders of both the local council and the corporation were understanding and diplomatic, the two bodies

co-operated admirably, to the advantage of the old and new population. When they were undiplomatic and got across each other, a new and not uninteresting dimension was added to local controversy. Nobody shot anybody; nobody planted plastic bombs. In time the two bodies settled down either to friendly collaboration or at least to peaceful co-existence.

Compared with the difficulties encountered by the two private-enterprise garden cities, those of the development corporations must have been much less formidable. They had the national government behind them, legislative as well as common-law landowners' powers and rights, an absolute assurance of the necessary finance for development and building, and co-operation from ministries and great-city authorities in obtaining the transfer of industry and population. Whereas the two garden-city companies could only offer businesses and families uncertain hopes that real towns would be successfully established, the government corporations could invite them with complete confidence. Of course both the garden cities and the government towns had to contend all along with the problem of matching period by period the influx of employing firms and employable workers. But it made a great deal of difference that the latter always had the financial resources to promise the provision of factory and commercial buildings and of housing to meet the requirements of each.

There have been lapses, however. The expansion of industrial and other employment in some of the towns has not invariably been kept in step with the provision of houses. Several of them, in their early stages, had difficulty in inducing industrial firms to come to them as rapidly as was required, and housing progress had to be slowed down below the intended programme. Later, the converse disproportion arose in a number of the towns. Industrial employment expanded in these so unexpectedly rapidly that there was (and still is in some) a considerable waiting list for housing; a severe hardship to individuals, and quite a serious handicap to established firms, and seen by them as a reproach to the foresight of certain of the corporations. It is possible that some corporations, over-anxious to ensure diversity of employment, admitted new firms in insufficient regard for the expansion of existing firms. The shortage of labour, however, is not a phenomenon confined to new towns. In a condition of full or almost full employment, it occurs in many old towns as well. The matching of employment capacity to local population is an economic and planning problem of great importance and difficulty—the solution of which requires measures that no government has yet evolved, but which have to be found if the control of the size of towns and the preservation of country belts is to be achieved.

THE SELECTION OF SITES

Many possible sites for new towns had been suggested before 1946 in advisory and statutory plans: ten, for instance, in Abercrombie's *Greater London Plan*. Under the New Towns Act the choice has had to be made

by the responsible ministries in England and Wales and in Scotland, who have found it no easy task. Obvious major necessities were availability of water supply and drainage at reasonable cost, main road access (now more important than main rail access), and stable and level soil. Existing development had to be taken into account: in Britain it is scarcely possible to find a completely unbuilt-on site. In every case advantages and disadvantages had to be carefully weighed, and there were almost always strong local resistances from farming and residential interests. The latter distorted some of the choices, but on the whole the decisions seem to have been sound in that, despite the emergence of a few unexpected difficulties, satisfactory planning and development have proved possible without ruinous cost. The main characteristics of the sites are described in our chapters on the individual towns.

The sites designated and purchased are in most cases adequate for the intended populations of the built-up town areas, at a tolerable overall density. But with one or two exceptions the town site acquired does not include any substantial area of green belt—contrary to the recommendations of the Reith report. The justification for this is that under statutory planning control green belts can now be firmly reserved against urban development, a safeguard that Howard and his free-enterprise companies could not count upon. Given a resolute national or regional policy green belts do not now have to be in the ownership of the town-developing agency in order to be protected.

There is still a danger, none the less, in the tendency for the target populations of the new towns to be increased. Carried too far, as we think it has been in several cases, this increase unbalances the internal plans, and brings about either an undue expansion into the green belts, or an undesirable increase of internal density. As every gardener knows, it is in the nature of healthy organisms to proliferate. If left to themselves, plants will spread outwards and tighten up internally until they choke each other, and diminish in florescence. In the resultant competition for space it cannot be assumed that it is the most useful or beautiful that survives. The gardener is compelled to limit the plants' individual impulses and ambitions. Commercial companies, municipal authorities—and, yes, new-town development corporations—are subject to analogous impulses and ambitions. Whatever their intentions when small, they may change when they are adult and feel the glow of success and vitality. There has to be the equivalent of a master-gardener to keep them in bounds.

Even when, as in contemporary Britain, the necessity of some limit of town size is in principle accepted, town authorities and officials (including local planners) are tempted to plead for a bit more expansion before the ban is imposed. Like St. Augustine in his youth they pray: 'Give me chastity and continence, but do not give it yet!' The self-restraint of institutions no less than of persons will always be subject to this weakness. It has to be conditioned by a wider social convention and in the end by law.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

EXPANSION OF EXISTING SMALL TOWNS

As we have seen, after the foundation of the first 15 new towns (1946–50) no more were started for some years. In the interval the Town Development Act, 1952, was passed as an alternative method of relieving urban congestion. Under this and a later Act for Scotland, agreements can be made between big cities and small towns or county districts willing to accept persons and industries from congested areas, with financial aid from the Government and in some cases from county councils. Strenuous endeavours have been made by the authorities of London, the West Midlands, the Manchester and Merseyside conurbations, and Glasgow to apply these Acts, which are a useful, indeed necessary, supplement to the New Towns Act, and many expansions of country towns have resulted.

But in relation to the amount of ‘overspill’ needed, and the time and energy devoted to negotiations with hundreds of possible receiving areas, the total effort is disappointingly small. Up to the end of 1961 the number of persons transferred and housed under these Acts was 74,000, as compared with 360,000 provided for in the new towns. The machinery has proved cumbrous and slow, and though some of the local expansions are good, in general they cannot be equal in technical quality to the work of the large skilled teams assembled for new-town construction. Many observers now think that small expansions could be more satisfactorily entrusted to development corporations, each undertaking several in one sub-region.

The first country-town expansion for London was at Bletchley (Bucks, 40 miles out) and the largest at Swindon (Wilts, 70 miles out). Many others are in progress in Beds, Bucks, Herts, Kent, Hampshire and East Anglia. Staffordshire has been particularly successful in expanding a number of its small towns by arrangements with Birmingham and adjoining boroughs. Operations under the Acts are also in progress around the Manchester and other conurbations. Glasgow in 1959 adopted a most imaginative programme for transfers to small towns all over Scotland.¹ Efforts on these lines continue in many parts of Great Britain. The results are by no means insignificant, but they are obviously inadequate as contributions to the enormous problem of urban dispersal.

COUNTY COUNCILS AS TOWN-BUILDERS

There is a third procedure under which urban developments comparable with new towns may be carried out. Northumberland County Council proposed in 1961 to acquire 700 acres of land at North Killingworth, on the fringe of the conurbation of Tyneside, for an overspill of 17,000 from some of its congested parts. The Ministry has agreed to designate this land as a ‘comprehensive development area’, which gives the council power to buy it by agreement (with compulsory acquisition in reserve), to lay it out, and to provide roads and services,

¹See *Industry on the Move*. Glasgow Corporation, 1959: supplement, 1961.

sites for private as well as public housing and some industry, and community facilities. The project, though for reasons of situation and scale it does not rank as a new town in the true sense, is a promising precedent for planned co-operation between public and commercial enterprise.

And in fact the Northumberland County Council has already bettered its own lead by its project for Cramlington New Town, further out and separated from Newcastle by a green belt, which under the same procedure is to be planned for 48,000 with local employment. This also has been approved by the Ministry, and is of special importance as it falls into the national policy of fostering new growing points in the north-east region.

Durham County Council in 1962 asked the Ministry to commission a new town, under the Act of 1946, at Washington. The Ministry, however, has countered with a recommendation to the council to do the job itself under a comprehensive development order. At the time of writing the issue is not decided. The TCPA has expressed the view that a development corporation under the New Towns Act would be a more suitable type of agency for both Cramlington and Washington. Welcome as local council initiative is, a development on the true new-town scale requires an assembly of skills and experience that a county or borough authority cannot usually be expected to possess.

Chapter VIII

THE FINANCE OF NEW TOWNS

‘Cash-payment is not the sole nexus of man with man.’

—CARLYLE: *Past and Present* (1843)

‘But it is pretty to see what money will do.’

—SAMUEL PEPYS: *Diary* (1667)

NEW towns, being necessary for the salvation of existing old towns and for accommodating satisfactorily a growing population and its activities, could well be regarded as worth building at considerable public cost. No doubt they were so regarded, if for different reasons, in classical and medieval ages. Alexander and Edward I have left no audited balance sheets to justify their enterprises. Presumably the capital cost of their towns, like that of castles, citadels, temples and cathedrals, came out of taxes and levies on the material and labour resources of the community. By similar means we in our own day finance highways, defence works, museums, schools, and space rockets.

Proponents of the new towns, however, from Howard onward, have claimed that they can, over a period of years, be sound economic propositions: that the revenues and increments of value consequent on the settlement of population can be expected not only to cover a normal ‘commercial’ return on capital, but in time to yield a surplus usable for public purposes. The record already shows that this is a valid claim.

Considerable sums have to be expended, of course, before any revenue is obtainable. Land has to be purchased, water and drainage works and roads constructed, service mains laid, and administrative expenses incurred, in advance of house and factory building. As in the initial stages of any other large-scale undertaking—such as a railway, an ocean liner, an oil refinery, or a tea plantation—there is a time-lag before the investment fructifies.

Investors in the two garden-city companies, which were originally financed by ordinary shares, had to wait years for earnings out of which dividends could be paid. For the later new towns the capital was provided by the Government and advanced to the development corporations in the form of loans repayable by annuities over sixty years. Interest and repayments were chargeable from the start. During the period before revenues arose these charges were met, in small part by outright Government grants, and in the main by borrowings to meet revenue deficiencies; the latter had to be added to the total balance-sheet liabilities. After a few years, however, revenues materialized, and in most of the towns in England and Wales they have already overtaken the cur-

rent loan charges on the whole of the capital invested, including the accumulated deficiencies of the earlier years.

Up to March 1962 (an average of about $13\frac{1}{2}$ years after the start) the Government had made capital advances to the 15 towns of about £301,000,000. Some £6,500,000 had been repaid, so that the outstanding investment was about £294,500,000. Houses, workplaces and other buildings had by then been provided for about 386,500 of the 800,000 persons planned to be added to the pre-designation populations of 133,300.

On top of the expenditure by the corporation, further large capital sums have been spent by county councils on schools, by various authorities on public services, by business firms on factories, shops, offices and public houses, by private owner-occupiers on houses, and by other agencies on churches, institutions and social facilities.

ECONOMY IN CAPITAL EXPENDITURE

(It would be wrong to regard this huge investment as a draft on the nation's capital-forming capacity that in the absence of new towns would not have been necessary. An equivalent expenditure would have been incurred somewhere in any event. In a land with an expanding economy, a growing population, and an urban fabric subject to normal depreciation, a vast amount of replacement as well as new construction is continuously needed, for which the capital has to be found out of the pool of general savings, either through Government loans or private investment.

As an element in urban replacement and expansion the new towns have undoubtedly been less costly than any conceivable alternative. If instead of the 115,000 houses provided in them by the corporations and local authorities, a similar number of dwellings had been built in or near the older city centres, higher densities would have been necessary, and most of the added dwellings would have had to be in the form of multi-storey flats. The construction cost of such flats is commonly as much as £800 to £1,000 each in excess of that of the two-storey houses prevailing in the new towns. Thus if even half the number of dwellings in the new towns had been built instead as flats in cities the extra cost (wholly unremunerative) could have been of the order of £40 or £50 million.

Critics have suggested that the admitted economy on housing in new towns may be substantially offset by the necessity of providing in them *de novo* other types of buildings already existing in old centres. But this is true only to a relatively small extent, if at all. Much of the equipment in existing cities—schools, service installations, and all sorts of buildings—is out-of-date and overdue for replacement. Modernization of dwellings carries with it many more baths, lavatories and taps, and increased consumption of water and discharge of wastes involves amplified mains, new sources of supply, sewers and outfall works. The smaller the retained population, the less costly are these expansions and renewals. Moreover, a continued over-concentration of people and their work in a great

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conurbation necessitates huge capital expenditures on new and wider highways, subways, overpasses, public transportation systems, parking meters and traffic signals, just to keep things going. In Britain it is the custom for the Government to contribute 75 per cent of the cost of highway improvements. In the four years 1957-61 £10 million was spent on road improvements in London, and the Minister of Transport 'hoped' to authorize another £28 million in the succeeding three years. By 1965, he added, 'we shall be spending over 20 times what we spent in 1955.' And great pressure is placed on the Government to pay the whole capital cost of over £40 million for a new tube railway in London, which cannot be recovered, since passenger fares will at best only meet running costs, unless the fares are very considerably increased.

Again, in the over-large cities there is an acute shortage of space for schools, parks and playing fields. The larger the retained population the greater is the acreage required for such open space, and the greater the local displacement of population from land taken for it.

ECONOMY IN HOUSING COST AND SUBSIDIES

No doubt it is considerations of this nature, in addition to the enormous burden of subsidizing new flats, that has led the municipal statesmen of London to support a dispersal policy, and even to contribute to the cost of housing in distant towns for some of their displaced families. This is not only humane, not only imaginative; it is also financially advantageous to London rate-payers.

Recognition of the economy of new towns as a factor in redevelopment has been slow to come. For many years the TCPA, in its publications and statements to Ministers, showed by simple calculations that housing in new towns instead of at high density in old cities would save colossal sums in capital and subsidies. Government housing subsidies, fixed for 60 years (the same period as the loans), are so devised as roughly to equalise the rents payable for dwellings of different construction costs and on sites at different prices. Capitalized at the current rate of interest, the difference in the total subsidies on dwellings of various types just about equals the difference in their original capital cost. Thus in effect the Exchequer pays annually to the housing authority a substantial part of the loan charges on its unremunerative expenditure.

Until recently it was a condition of the Government subsidies that the local authority must contribute, also for 60 years, additional subsidies of a third or half of the Government's. This condition has been repealed, and though city authorities still have to make up a big difference between the rents and the loan charges, they may meet this, or part of it, out of increases of rents on their older housing projects. New multi-storey flats, still heavily subsidized by the Government, still involve a further deficiency to be met locally out of rates or the increased rents of existing dwellings. In the year 1960-61 the Government housing subsidies amounted to £60 million, and those from local authorities £18 million, the increases on the previous year being £2½ million and half

a million respectively. The subsidy scale for new houses has since been revised, but the additional subsidies in favour of high flats, and for expensive sites, remain.

In view of the much-canvassed concern for public economy, it seems to us strange that no section of opinion, apart from the TCPA, could be induced to take any interest in the excess cost of housing and the distortion of urban development caused by differential subsidies. If government grants had been equal for all types of dwellings in all situations (better still, if they had been proportional to floor space) a very different and better distribution of the national housing effort must have resulted.¹ Local authorities would not, because financially they could not, have endeavoured to pack as many people as possible in redevelopment schemes. They would have been forced much earlier to consider the alternative of planned dispersal. There would have been, in some degree, an economic check on the expansion of employment and the increase of land values in central city areas. The differential subsidies weaken this economic check. Adam Smith and Alfred Marshall, we imagine, would have been shocked to the core at this policy. But no modern economist, no Parliamentarian, no Treasury watch-dog, paid any serious attention to it.

STUDIES OF ALTERNATIVE COSTS

After many abortive attempts to raise this issue, the TCPA in 1958 challenged the then Minister of Housing and Local Government (Mr. Henry Brooke) to have its figures examined, and if they were fallacious to say so and put an end to the one-way argument. He accepted the challenge, and the TCPA submitted calculations of the comparative public costs (in capital and subsidies) of providing 1,000 dwellings of 850 sq. ft. of floor-space:

(a) All (1,000) on city land at £9,000 an acre in 12-storey flats at 40 an acre;

(b) Half (500) on the same area of city land at 20 an acre, and half (500) in new towns or country-town expansions at 14 an acre.

The alternative costs in capitalized Exchequer and local subsidies on the scales then in force were shown to be: for scheme (a) £1,809,000, and for scheme (b) £644,000.

Thus scheme (b) would save in housing subsidies (really in capital expenditure) on each 1,000 dwellings £1,165,000, or £1,165 a dwelling. (On 15,000 houses in a new town of 50,000, with 15,000 houses built at lower density in a city centre, as against 30,000 all in the centre, the saving would be £34,950,000.)

Having studied the TCPA figures, the Minister's experts did not fault the arithmetic, but they disputed some of the assumptions. They argued that a flat of 750 sq. ft. was comparable with a house of 850 sq. ft.—a plainly ridiculous contention. They also argued that in practice a city

¹For a brief history of the differential subsidies and a study of their effects, see F. J. Osborn: 'How Subsidies Distort Housing Development' in *Lloyds Bank Review*, April 1955.

scheme at 40 dwellings an acre need not be all in 12-storey flats; it could have 42 per cent of 11-storey flats, 35 per cent in 4-storey maisonettes, and 23 per cent in 2-storey houses. This seemed to the TCPA beside the point. Obviously if pressure in city centres were relieved, it would be the higher and more costly flats that could be omitted. However, the Ministry's revisions did not reduce the estimated saving by quite half. It was conceded that over £600,000 of capital cost could be saved on 1,000 dwellings. But the Ministry commented that 'a great many considerations, both social and economic, come into the question of dispersal which could not be evaluated in figures'. And it added cursorily: 'No attempt is made to embark on any consideration of these much wider issues.'

What wider issues the Ministry had in mind may be surmised. We have dealt with some of them already; we shall discuss others in a later chapter.

A more elaborate study of the comparative costs of high-density central housing and lower-density housing with partial dispersal was made by P. A. Stone of the Building Research Station (Department of Scientific and Industrial Research) in a paper to the Royal Statistical Society in 1959.¹ Using BRS figures Mr. Stone amply confirms the TCPA's estimate of the excess cost of high flats, but goes into a wider range of costs, private as well as public, and also converts the capital costs into annual charges. He deducts from the saving on housing in new towns the cost of providing in them new urban equipment of the classes already existing in older towns, with allowances for the estimated period of useful life of the latter. And he adds to the cost of a new town a very large sum for the removal of furniture and personal effects, and of factory, office and shop equipment.

Mr. Stone's calculations are complex and involve a number of questionable assumptions. He could hardly be accused of a bias towards underestimating the cost of new towns or exaggerating that of high-density redevelopment. Basing his final comparisons on a unit of 154 persons rehoused in various ways, and including the corollary costs (public services, workplaces, schools, other buildings and open spaces) he finds that as between (a) housing 70 of them in two-storey houses centrally and 84 in new towns, and (b) housing 122.5 of them in 5-storey flats with lifts and only 31.5 in new towns, (a) is somewhat cheaper in annual costs than (b). Higher blocks than 5-storeys would, of course, show a much greater excess cost, as the TCPA figures had demonstrated, though Mr. Stone makes no reference to its estimates. Dispersal to existing country towns, he concludes, would be cheaper than to new towns, by reason of their possession already of much community equipment; but here he seems to ignore the financial advantage to a developing agency of owning local shopping centres and commercial buildings as part of a large-scale development. Moreover, some

¹P. A. Stone: 'The Economics of Housing and Urban Development'. *Journal of Royal Statistical Society*, Vol. 122. Part 2, 1959.

new towns under the New Towns Act are based on small existing urban units that already have some community facilities; the distinction between a 'new town' and a 'town expansion' is one of the type of machinery used for the development rather than of the size of the original urban unit on which it is based.

Useful as Mr. Stone's paper is, we have doubts about the validity of extending the cost analysis of a public enterprise like new-town building and central redevelopment into the private economic sector. Movements of industry, for example, though affected by planning restrictions, are in essence voluntary and may and commonly do result in the occupation of more efficient plants in better situations. A firm that starts a new enterprise is not expected to calculate the cost to its competitors of the loss of turnover or of the withdrawal or higher wages of workers forced on them by its operations. Public agencies undertaking development should certainly be concerned not wantonly to impose great difficulties or heavy extra costs on private interests. But so long as they have good social and public reasons for their actions, must they prove in advance that everything they do will cost private interests less in capital or annual charges than the public gains? Was such a test applied to the building byelaws, sanitary legislation, the abolition of slavery or child labour, or the Factory Acts? Is it possible to evaluate either the commercial gains by greater efficiency or the social gains in health, leisure and other amenities?

It seems to us that as the dispersal and new towns policy has been conclusively proved to be highly economical to the state, in some degree economical to the local authorities, and in many ways clearly advantageous to society, the case for it is unanswerable. Nevertheless, it is reassuring to know that, taking every calculable interest, private and public, into account, there is an overall financial gain. Seldom in the field of social policy does such a coincidence occur.

FINANCIAL SUCCESS OF THE GARDEN CITIES

Before considering the published accounts of the new town development corporations, it is interesting to look at the financial experience of the two private-enterprise garden cities.

The Letchworth company, First Garden City Limited, started in 1903 with an issued capital (admittedly inadequate) of £101,000, increased over a period to a total of £250,000 in ordinary shares and £150,000 in 5 per cent preference shares. All expenditure above this was financed by mortgage loans, debentures, bank advances, and revenues ploughed back. After the abolition of the 5 per cent dividend limit on the ordinary shares, they were doubled in nominal value to £500,000 by a free issue. There had been a long delay in the payment of the cumulative dividend of 5 per cent, but all arrears were paid by 1946. In 1960, when the control of the company passed to an outside interest, the value of the equity attributable to the ordinary shareholders was estimated by the directors at £2,400,000, and a valuation

for the company in 1962 put it at £3,728,000. At the lower of these figures the ordinary shareholders' equity had appreciated to at least 9 times their original investment. The dividend for 1961 was 16 per cent on the doubled capital, equivalent to 32 per cent per annum on the actual investment.¹ The population had increased from 400 to 25,000.

Welwyn Garden City Ltd. up to the time of the taking-over of the estate by the Government showed a similar appreciation. The company, started in 1920, raised in ordinary shares £119,500 (the maximum dividend in this case being 7 per cent), and in 6 per cent debenture bonds a further £800,000. By the reconstruction in 1934 the ordinary shares were written down from £1 to 2s. Debenture bonds were converted into ordinary shares on a more favourable basis. When the company was wound up after the Government take-over in 1948 the holders received in all £2,315,000—a surplus of £1,395,000 over their total original investment. (The ordinary shareholders lost £66,700). The population had grown from 400 in 1920 to 18,000 in 1948.

We need not here discuss further the social misfortune that up to the dates of public takeover increments of value benefited the shareholders and not, as Howard and his colleagues had intended, the towns and their inhabitants. What is important is that the thesis that the creation of new towns produces substantial increments is proved.

Some may argue that the thesis is undermined by the fall in the value of the £ since the garden cities began. But a correction for this would work both ways. At each stage of capital expenditure, leases for 99 or 999 years were granted, at rents corresponding to the money values of the times. If these could be reassessed at later market ground rents, they would enormously increase the gain in total value. In this respect, the lessees got the benefit rather than the shareholders or the inhabitants at large.

The Letchworth appreciation is remarkable in view of the company's policy of abstaining on the whole from the exploitation of rack-rent values in the town's commercial centre or factory area. On the other hand the company did particularly well on its water, gas and electricity undertakings, which proved more profitable even than its ground rents.

Welwyn Garden City adopted from the start the practice of building and retaining ownership of most of the shops and offices and smaller factory buildings, letting them at market rents which could be raised as population grew and money values changed. As in the later new towns, this policy was possible because of the ownership of the complete town site. It is this that makes new-town building so sound an economic proposition. But the monopoly it implies points to the desirability of public ownership of the freehold, or at least some limit on charges or some public share in the financial results, as is usual in the case of a gas, electricity or water undertaking.

¹It is pleasing to record that by a special Act of Parliament the First Garden City estate passed into public ownership on 1 January 1963 (Letchworth Garden City Corporation Act, 1962).

Housing subsidies played a very small part in the finance of Letchworth and Welwyn Garden City. Letchworth before the 1939-45 war received few subsidies. In Welwyn up to 1938 the capital value of Exchequer subsidies under the Housing Acts amounted to about £200,000, on 2,742 houses. Far larger subsidies were paid at that time for houses and flats in London and other great cities. Seen as an alternative form of urban development, the garden cities showed a considerable national saving, as well as a private profit.

THE GOVERNMENT NEW TOWNS

There is every sign that the later new towns are highly satisfactory national investments. Indeed the first twelve in England and Wales, taken together, reached the stage of profitability in about a dozen years from their start. The revenue accounts for the year to March 1962, after allowing for deficiencies on some of the sewerage undertakings (normally a local authority service) showed a net surplus of £757,000.

That this was a real 'profit' is masked, indeed concealed, by the official system of accounting, perhaps appropriate in early years, but misleading once revenues have overtaken loan charges on the whole expenditure. The net 'accumulated deficiencies' of £3.7 million shown in the balance sheets at 31 March 1962 are not, in the ordinary sense, losses carried forward. They are part of the investment of £255½ million, on which interest and repayments have been paid throughout. Moreover at that date there were large areas of partially-developed land that had been much enhanced in value: the corporations' estimates of the interest charged for the year 1961-62 on expenditure not yet fructified was £564,000, which would bring the net surplus for the year to £1,321,000.

There is one minor offset to the increase in values: the grants (totaling £446,725) by the Ministry towards interest charges in the first two years. The housing subsidies received by the corporations (approximately £32 per house p.a.), should not be regarded as an offset, since, as we have shown, larger subsidies would have had to be paid for housing elsewhere if the new towns had not been built.

For the three towns in Scotland a claim of profitability cannot yet be made. In the year 1961-62 they added £663,000 to their 'accumulated deficiencies'. Comparison with the results in England and Wales would be meaningless in view of the wide difference in the rent levels. The average house rent in the Scottish new towns up to 1961 was less than a third of that in England and Wales; and even with Government subsidies 80 per cent greater net rents received fell far short of outgoings.

In the new towns in England and Wales the housing rents are fixed on a cost basis, so as just to meet, with the aid of the subsidies, the outgoings on loan charges, repairs and maintenance. Housing is not expected to yield a surplus. For this the corporations have to look mainly to ground rents of sites leased for business purposes, and especially to the occupation rents of industrial and commercial buildings. Like

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the Welwyn Garden City company, the new towns have invested boldly in this class of property (£43 million up to March 1962) and have been rewarded by a return of 9 to 10 per cent on it—a useful (indeed necessary) margin over the average of about $5\frac{1}{2}$ per cent they have paid in interest and loan charges. That a new-town agency should itself build shops and offices for letting is of great financial importance, and particularly in the early days, because it is only by that means that they can obtain progressive rentals as population grows. Adequate ground rents cannot be negotiated with commercial property developers while populations are small and the rate of growth uncertain.

In many large-scale estates in the U.S.A. it is the practice to lease retail shops at rentals based on a percentage of their turnover. This seems a very intelligent method, worth consideration here. The British practice of periodical revision of rents as values increase with population is based, perhaps with less exactitude, on the same principle. In at least two of the British towns (Welwyn Garden City and East Kilbride) the ground rent on a long lease of some shop sites is assessed on a percentage of the occupation rents received by the firm owning the buildings.

In the new towns, as in the two garden cities and in any large-scale development, private or public, many sites have to be provided free or at less than cost for such essential needs as recreation, parks, churches, and community buildings. Cash contributions are also made towards sewerage, water, street works, lighting, public halls, swimming pools, sports stadiums, and youth clubs. These have all been included in the total expenditure already referred to, on which (in England and Wales) there is now a healthy return.

We repeat the opening point of this chapter. The new towns have produced an immense improvement in living and working conditions and industrial efficiency, and a vast gain in human time for leisure and useful occupation. If these benefits had cost much money they would be justified. But in fact the new towns bring the nation very considerable immediate savings in cash, as well as long-term profits.

EFFECT ON LOCAL AUTHORITY FINANCE

The rapid increases of population in the new towns have necessitated much expenditure by local authorities and county councils, but have also greatly increased rateable values and rate income. Most of the buildings being new and of modern types, the amount of rates collected per head of population is higher in the new towns (in 1960–61 about £18 as against £14 17s.) but the average household income must also be considerably greater. The county councils have not found the provision of schools, libraries, fire, police and ambulance services an undue burden in relation to the growth of rateable value. The district councils, however, do find themselves unable, out of available resources, to provide as soon as required all the social facilities within their statutory powers; and it is in this field that bigger contributions from the surplus resources of the new town estates might now well be made.

FUTURE OWNERSHIP OF NEW TOWNS

All political parties in Britain have supported the new towns policy. The one issue on which there has been a major conflict of views is that of their ultimate ownership. No party has questioned the principle that the freehold of each town should remain in unified public ownership and that any financial surpluses from them should be used in some way for public purposes. But Howard's proposal, endorsed by the original intentions of the two garden city companies, that on completion of a town the ownership should pass to the local authority or some local trust, and that surpluses should be used 'for the benefit of the town or its inhabitants', is seriously contested.

A large majority of the New Towns (Reith) Committee doubted the wisdom of combining the functions of sole landowner and local authority in a single body subject to the changes of personnel 'natural to and proper in an elected body', and favoured the retention in being of the new town corporation as landowner. Lord Silkin's New Towns Act, 1946, went back to Howard's conception, and provided that, when substantially completed, each town estate should be handed over to the local authority.

In 1959, however, the Government decided that, in view of the scale of property management involved, the ownership should remain, 'for the time being at any rate', in the hands of a body independent of the local authority. Carried against strong Labour opposition, the New Towns Act, 1959, set up a Commission for the New Towns (in England and Wales) to take over the assets and liabilities of each development corporation as it completes its work, with the duty 'of maintaining and enhancing the value of the land' and the return from it. It was emphasized in the debate that the Commission was not to be a 'disposals body', but was to act as a 'good landlord'. And the Act requires the Commission to 'have regard to the purpose for which the town was developed and to the convenience and welfare of persons residing, working, or carrying on business there.' Powers are given to contribute towards amenities for the towns and to provide water and sewerage services, but the Commission (unlike the existing corporations) will be subject to normal planning control. It is directed to appoint local committees of management, with some local members.

The Commission was duly set up in 1961, with Sir Duncan Anderson as chairman, and among the other members the ex-chairman of the corporations of the two towns first taken over—Hemel Hempstead and Crawley. While the latter appointments make for continuity of policy, the questions remain: as to whether a central Commission will not be too remote from local interests and democratic influences to be permanently satisfactory; and as to what share, if any, the towns will have in the financial surpluses. The Act of 1959 requires the Commission to pay these surpluses to the Treasury. The inhabitants will claim that they should be used for their benefit, since the financial success is largely due to their activities and they need further urban amenities.

Undoubtedly there will be much argument about this. If the new towns had been conceived as speculative enterprises the 'risk-taking' investors (the nation as a whole) might be held to be entitled to the profits. But they were not so conceived and there was no real risk. The only capital sum on which interest has not been paid throughout is the bagatelle of £446,725 granted by the Ministry at the outset. If this is regarded as the true 'equity' investment, already one year's return on it (1961-62) is £757,000—a yield of 167%!

If, surely more correctly, the new towns are regarded as a public service, the first call on surpluses is for the improvement of the service. On that view the Commission for the New Towns should not act merely as the 'good landlord', charitably devoting a fraction of its gains to the tenantry, but rather as a trustee for the towns, applying its surpluses mainly to community facilities in them until they are well endowed in all respects. The latest year's surplus revenue of £757,000, if static (and it should grow considerably over the years), would service loan charges on capital expenditure in the twelve towns of up to £12½ million—incidentally enhancing future values.

In the long run it seems certain that total revenues will exceed what is necessary to maintain local amenities on a high level. At that stage taxpayers, or the nation as a whole, might stake a claim to participate. Or a fund might be set up to provide social facilities in further new towns at an earlier stage than in their forerunners.

Chapter IX

THE TOWN AND COUNTRY PATTERN

'The more we are together,
The merrier we shall be.'

—*Popular song* (not claiming to be based on sociological research)

Now that land-use planning and some guidance of the distribution of population are recognized as governmental functions, there is a need of public and expert discussion of the pattern of town and country to aim at. A complete and logical new layout suited to modern likings and resources is of course precluded by the vast and durable developments already located. But even if we had a virgin land to plan, there is no conceivable arrangement that would provide towns ideally satisfactory to persons of all types and temperaments.

Unlike Swedenborg's heaven, the continuum in which we exist is so contrived that the presence of some things in close proximity to us excludes the presence of other things. We must all be deprived, however ingeniously we plan, of some facilities it would be nice to have near by. Simpler people, of whom fortunately there are many, cheerfully put up with deprivations trying to the more sophisticated. The writer of this chapter, for example, can get on without daily resort to a dog-track, a bingo saloon, a golf course, a Moslem mosque, a trout stream, a grouse moor, a bookmaker's office, or a choice of forty snack-bars, cinemas or night-clubs. He would be reasonably content with a detached house having normal public services and a garden of a fifth-acre or so and an outlook containing more trees than buildings—within ten minutes' walk (this is the snag) of a good shopping centre, the New York Library, a golden beach shelving down to an ocean of Caribbean warmth and blueness, a repertory theatre (professional or amateur), the Prado or the Louvre, the Reform Club, the Yosemite Valley, La Scala Opera House, Snowdonia, the Alhambra and Generalife, a village pub frequented by non-urban bumpkins, and the homes of a few hundred friends now inconveniently sprinkled over five continents. He would want to be able to ring the changes occasionally on these stand-by items. For less constantly desired amenities he would be willing to drive, ride or fly to some other place. But much of this modest specification is denied to him—by the laws of space and time.

What would be possible, for him and many another ordinary town-dweller, is to have the desired single-family home with its private garden space and quick access to the facilities indispensable for habitual resort—

work, shopping, education, worship, sport, recreation, social forgoing, and a pretty wide (though still not all-inclusive) variety of 'cultural' activities. The essentials, and a good selection of the desirables, can be provided in a town of moderate size. To have to travel farther for occasionally-used facilities is no severe hardship. What can be avoided, or much reduced, by planning is the daily shuttling back and forth between pleasant residential districts, poorly endowed with communal facilities, and centres where such facilities and workplaces are over-assembled.

The conception, entertained by some amateur planners, that the suburban population can be re-concentrated in city cores to match an intense business and cultural concentration, must be dismissed as quantitatively unrealistic as well as sociologically reactionary. To the very limited extent to which it could be done, it would involve the sacrifice of the popularly-desired type of family dwelling. There are, of course, people who genuinely prefer to live in flats close to the special set of advantages that the centre of a great city offers; and it would be better to build for them there than to add to the present excess of centralized businesses and entertainments. But these people are a small minority. And they will be among the beneficiaries if provision is made elsewhere for some of the central workplaces and some of the people who do not share their tastes in environment.

COMMUNICATIONS, SPACE AND TIME

Note should be taken in this context of the lessening of the relative advantage of close assembly brought about by the progress of means of communication. Successively the horse, the tramway, the bicycle, steam and electric traction, the automobile and the aeroplane have enabled tens of thousands, and later millions, to associate in towns and regions for production, distribution, and physical and mental exchange. A vastly widened scope of intercommunication is now provided by the development of the press (books and journals), the library, the post, the telegraph and telephone, the cinema, the gramophone and tape-recorder, sound radio and television. Moreover, mass production, packaging, refrigeration and preservatives, rapid conveyance and chain stores have extended enormously the range of distribution of products, often at retail prices that differ little as between large and small towns and remote country districts.

Thus a modern man can not only be as copiously served with material goods in a small town as in a metropolis, but he can be as well-informed and as intimately in touch with world currents of thought and culture. The rebuke of 'provincialism' or 'kleinstadtereï' in the old sense is not merely obsolescent; it is (for good or ill) in process of reversal. An intelligent citizen in a British new town can be aware of pretty well anything interesting that is emerging in London, Paris, New York or Moscow. It is doubtful if a typical metropolitan is as fully aware of what is happening in the smaller towns. But he can be; our peril today is

rather of tame standardizations or world-fashions in culture than of regional and provincial shortfalls.

In Plato's day the contacts and exchanges of civilization necessitated the grouping of some tens of thousands of people within walking distance of each other, and for political purposes within shouting distance. Rapid transport has extended the area of convenient physical contacts, and printing and electronics have abolished the shouting limit. These inventions should have emancipated civilized man from any need to bunch closely together. But we have sadly misused the blessing of rapid transport, with the fantastic result that an outer suburban city worker, taking an hour daily each way between home and employment, may dissipate in his lifetime as much as 10 years of 40-hour working weeks in 250,000 miles of fruitless travel. If he lived within 15 minutes walk or ride of his work, three quarters of this time and mileage could be saved. He might travel instead 8 or 10 times round the globe. Or he might have an extra 16,000 hours of leisure—8 years of working days—for his garden or other hobbies, or to loaf and invite his soul under better conditions than in a suburban train.

THE END-PRODUCT: MAN'S HOME ENVIRONMENT

Towns being necessary in an industrial society, the problem is to find the scale and structure that will yield the best practicable balance of advantages for human beings. No one doubts this; but in much discussion of the aims of town planning, and indeed of economic and social policies in general, far too little regard is paid to the end-product for which the whole complex apparatus of civilization exists—satisfaction in the personal life. And especially in the family life: for *homo sapiens*, after all, is unalterably a mammalian species. The fully-functioning human being spends a large part of his (or her) life-span in the family, first as a child formed and partially educated by parents, and later as a parent reversing the role. The mechanisms of his science, industry, trade, education, art, and government are not ends in themselves, but means to his sustenance, safety and fulfilment in his personal experience, which for the vast majority of persons centres on the home or dwelling—the base in which and from which he develops his interests, his passions, his hobbies, his excursions and adventures, his whole distinctive consciousness.

Thus it is no accident that in our age of rising and spreading affluence, and of political democracy, 'housing' has become a public issue of major concern. After a period of obsession with scientific, mechanical and economic progress—of immense potential benefit yet often seriously unbalanced—we are returning to an interest in the end-product. But the attention now paid in Britain and many other states to the numbers, structure, and internal design and fittings of dwellings is as yet by no means matched by attention to the spatial considerations governing their shape, arrangement and surroundings. Obviously town and country planning must attend at the same time to productive efficiency

and the services that make a well-endowed personal life possible. But the latter must in principle have priority: it is indefensible to sacrifice the end to the means.

BALANCE OF DENSITY AND EXTENT

Though the disadvantages both of urban congestion and of excessive urban growth are now recognized, there is at present no consensus of opinion among town planners as to the optimum balance or compromise between density and diameter. Nor is it likely that a universal scientific formula will emerge. What is essential, however, for reasons already suggested, is that fairly definite upward and downward limits of ultimate size should be set for each particular unit. This is a condition of intelligent planning. As F. J. Osborn wrote in 1934: 'It would be far better if planners and their partisans were divided, like the Lilliputians, into bitterly hostile groups, of Big-Townians and Little-Townians, Fifteen-thousanders and Hundred-thousanders, than that they should remain in their present bemused state of helpful purposelessness—like gardeners hoeing and watering the plant and wondering if it is going to be a daisy or a hollyhock.'

The wish in that passage has certainly been fulfilled—almost with mathematical precision. The Reith Committee in 1946 recommended as norms for new towns a lower population limit of the order of 30,000; its Scottish and Welsh members thought 15,000 might be sufficient for some towns in their regions; and while the majority favoured an upper limit of about 50,000, with perhaps up to 80,000 within a radius of ten miles, some felt that there might in certain localities be justification for towns considerably larger. The debate has continued since, and is never likely to end.

The New Towns Committee's suggested upper limit of the order of 50,000 was based on a balancing of the factors of (a) acceptable internal density and (b) convenient nearness of homes to workplaces, town centres, schools, and the open country. In the vital matter of housing density they assumed loyalty to popular preferences, and their expectation that 90 to 95 per cent. of the new-townspeople would want single-family houses with gardens has proved correct, as many reports of the development corporations (sometimes to their officers' surprise) show. The committee did not, however, lay down any precise standard of maximum or optimum housing density. The main purpose of their calculations was to ensure that the sites designated should be sufficient to permit of the lowest probable overall town density, which they estimated at 12 persons a town acre. They thought the density in most cases might be between 13 and 15 persons an acre overall, but was not likely to exceed 15.

The component factors in these calculations included the standards of net residential and neighbourhood densities prescribed for new developments by the ministerial *Housing Manual* of 1944, taking into account the desirability that the new towns should include average per-

centages of the national income groups, the more affluent of whom would require larger houses and larger plots than those in public housing schemes. Other factors were the areas required for industry, for commercial and entertainment centres, for schools, for parks and playing fields, and for roads and footpaths; the calculations for these were based on studies of the areas found by experience to be devoted to such purposes in existing towns, and where these were deemed unsatisfactory on reliable specifications by ministries or bodies like the National Playing Fields Association. It was assumed that development would be as compact as the observance of good standards would permit. But it was realized that some margin over the theoretical overall area required should, for the purposes of site acquisition, be allowed for, since there are always local topographical features that inhibit completely logical planning—and incidentally often make the plan more interesting.

The overall densities of the first batch of new towns under the Act of 1946 are in fact working out, so far as can be judged at the time of writing, in fairly close approximation to the Reith Committee's estimates. But though they are appreciably greater than the densities of most older towns of comparable size in Britain, there is a widespread impression that these new towns are too open—that they sprawl needlessly and inconveniently. The gibe of 'prairie planning' has been flung at them by some critics. There is no sign that the inhabitants in general share this agoraphobic reaction. The great majority of houses in these towns are built at densities not less than—in fact a little in excess of—those customary in inter-war municipal cottage estates; gardens are somewhat smaller; roads are no wider; school sites are about as large; only the space for playing fields and parks is rather more generous. But though the average total acreage per thousand persons is much the same as in the older country towns, it is far less unevenly distributed. This reflects the wider distribution of purchasing power brought about by recent political and economic changes, taxation, and social welfare policy. Inevitably it lessens the dramatic (indeed tragic) contrast between magnificence and squalor conspicuous in towns surviving from a former age. The new towns have no 'cosy' slum courtyards; no picturesque Tom All-Alones; no ducal palaces or estates or millionaires' rows; almost none even of the villas with several acres of garden that lower the average density of many cities. They might indeed be criticised for not having catered sufficiently for people of the higher-income groups who demand and are able to afford larger dwellings on larger plots.

In effect one may say that the pleasant vistas of trees, grass, flowers and harmonious design, in old towns the privilege of a few, have in the new towns been extended to everybody. If in spite of the great efforts made to produce local diversity in details of architecture and layout, the towns have some overall similarity to each other, complaint on that score is stupid. They are products of the same period, the same country and the same economic and social circumstances. Of course they cannot

differ in scenic effects as widely as Venice differs from San Francisco, New York from Granada, or Rothenburg from Bath. But a town is not a stage set to amuse on a single occasion a playgoer seeking a novel thrill. The perambulating aesthete who, once in a lifetime, sees a town, values it as a spectacle. He wants a change from his own town. But the resident sees the same buildings day by day for years. They ought to be pleasing to him, of course. But they cannot produce a continual sense of variation. That however can be given to him by the seasonal changes in vegetative surroundings—which is one reason why ample space, gardens and generous landscaping are not less important than architectural design.

In discussing this subject a vital distinction must be made between 'maximum density' and 'average density'. Maximum residential density is the largest number of persons or dwellings an acre contemplated or permitted for any part of the town. Such a maximum is often prescribed in town planning to safeguard future occupants from developers who might, for commercial reasons, crowd too many dwellings on a site; or to impose a degree of openness of development to maintain residential character or values. In any town, however, some and perhaps many house-plots will be built at lower densities than the prescribed maximum. Thus the average density will always be lower than the maximum.

Here we can discuss only briefly the subject of density standards, the assessment and formulation of which involves a study of many dimensional variables. Laymen can easily be confused by figures presented to them by experts, even when (which is not always the case) the experts understand them themselves.

It is important first to appreciate the various fields of parcels of development over which urban densities are calculated. What is now known as 'net residential density' is the number or units (persons, dwellings, or habitable rooms) to an acre of purely residential land, including houses, gardens and forecourts and the necessary access roads and paths. 'Neighbourhood density' is the number of persons an acre of a section of a town containing dwellings, local schools and shops, pubs and some other buildings, as well as roads and local parks and recreation spaces. 'Overall town density' is the number of persons an acre in the built-up area of the town as a whole, not including its green belt.

FACTORS IN A MAXIMUM HOUSING DENSITY

A maximum local density of 14 family houses a net acre (including access roads), or 15 dwellings a net acre if 5 or 10 per cent of flats at 40 an acre are provided, accommodates about 45 to 50 persons a net acre. It permits of two-storey houses of about 900–1,000 sq. ft. of internal floor-space, with frontages of about 20 feet, forecourts or front gardens 15 feet deep (the absolute minimum for a sense of privacy from public roads or sidewalks), back gardens 60 feet long, and road-widths of 40 feet average (leaving, if carriageways are 20 feet wide, only 10 feet each side for a 6 ft. sidewalk and a grass verge.) Thus the distance

between facing rows of houses is 70 feet—again the minimum for privacy. A margin of about 20 per cent has to be allowed for cross-roads, gaps between ends of terraces, and minor set-backs to give agreeable variety. The use of narrower cul-de-sac roads will increase the possible depth of some front gardens (or forecourts) but cannot increase the density unless the 70-foot distance between façades is reduced. That dimension can of course be reduced without destroying privacy if windows are omitted on one façade of a row of houses, but this has other obvious disadvantages.

Note that at the density of 15 dwellings an acre the prevailing back garden has an area of about 1,200 sq. feet. Adding the front garden the area is 1,500 sq. feet. The garden of a detached house of double the floor area (1,800-2,000 sq. feet) at a third of the density (5 an acre) is at least 4 times as large (6,250 to 6,500 sq. feet). The area of a normal spare-time allotment (10 rods) is 2,723½ sq. feet.

These figures (which anyone can check) destroy any illusion that a maximum housing density of 15 dwellings (50 persons) a net acre is lavish or lax. In relation to current popular aspirations it is in fact stern and stringent. Which is one reason why, as incomes and ambitions rise, many wage-earning families buy or rent houses on commercially built estates at much lower densities—commonly at 8 or 6 or fewer houses an acre. Most of the new town corporations have themselves catered to some extent for this higher demand. Some, on the other hand, under ill-advised pressure from the Ministry, have built large numbers of houses at 18 or more an acre.

No great cleverness is required to 'achieve' a greater housing density. All you have to do is to reduce one or more of the component dimensions—the frontage, the distance between windows, or the length of gardens—or to add more storeys to the buildings. It is true that none of the accepted minimum dimensions can claim 'scientific' validity; as we have said in Chapter IV, they are all matters of judgment—as indeed are standards for minimum wages, or minimum holiday periods, or maximum hours. But the laws of space cannot be defied by the most brilliant ingenuity. An increase of housing density inexorably reduces the ground space per dwelling and per person. Clumsy planning, as Unwin showed in *Nothing Gained by Overcrowding*, may cause an excess of road space—which is wasteful, because few take pleasure in road space as such—but at the density of 15 an acre as now practised there is certainly no surplus of road space for modern traffic and car-waiting requirements. Indeed, there is hardly room for the convenient placing of the domestic garages now required.

OVERALL TOWN DENSITIES

The arguments for higher densities in future new towns are based on several considerations, interesting to evaluate.

First, the more compact a town is the shorter are the distances between its parts—between home and employment, home and shops,

home and the green belt. And within a given area and radius, the higher the density the larger the population that can be planned for. Thus a town of 50,000 at 15 persons an acre overall has an area of 3,333 acres, and if roughly circular, a radius (centre to edge) of about $1\frac{2}{3}$ miles. It is a very tempting fact that if the density is increased by a third to 20 an acre, the population can be increased (also by a third) to 66,666, while the radius is not increased at all.

Unfortunately the consequent change in housing density is far greater than that in overall town density. The areas for industry, schools, shops, public buildings and open spaces cannot be reduced in proportion. The main reduction per 1,000 persons has to fall on housing space. An increase of one third in overall density, if other uses are unaltered, will necessitate almost a doubling of the net housing density—from, say, an average of 30, to 60 persons an acre. (In this calculation we have assumed the residential area to be about 50% of the total town area—a fairly usual ratio in smallish English towns.)

Conversely, if the population remains at 50,000, while the overall density is raised from 15 to 20 and the housing density is doubled, the radius is reduced only by about $13\frac{1}{2}$ per cent (less than $\frac{1}{6}$ mile).

The following table of populations, areas and radii will enable the reader to make other calculations:¹

<i>Population</i>	<i>Overall Town Density</i>			
	<i>15 persons an acre</i>		<i>20 persons an acre</i>	
	<i>Area</i>	<i>Radius</i>	<i>Area</i>	<i>Radius</i>
	(acres)	(miles)	(acres)	(miles)
30,000	2,000	0.997	1,500	0.864
50,000	3,333	1.287	2,500	1.115
60,000	4,000	1.410	3,000	1.221
100,000	6,667	1.821	5,000	1.577

Useful key points to remember in grasping the ratios of town size, radius, density, and population are these:

- (1) Doubling the radius quadruples the area, and (at the same overall density) the population.
- (2) Doubling the area (or population at the same density) increases the radius by $41\frac{1}{2}\%$.
- (3) Increasing the overall density by a third reduces the radius by only $13\frac{1}{2}\%$. But the housing density is increased by much more than a third; it may even be doubled.

PROPORTION OF FLATS AND HOUSES

The basic dimensions in a housing layout cited above, if accepted, imply that the barely tolerable maximum density for two-storey single-

¹For a fuller discussion of town size and density the reader is referred to Lewis Keeble's *Principles and Practice of Town Planning* (2nd Edn. 1959). In our view Mr. Keeble's prescription of a theoretical overall density of $20\frac{1}{3}$ persons an acre for a town of 60,000 underestimates the average areas required for playing fields and parks, for industry, for railways, for topographical peculiarities or scenic interest, and for the larger dwelling-house sites in a 'balanced' population. But he gives all the data for intelligent consideration.

THE TOWN AND COUNTRY PATTERN

family houses is about 14 houses (or 45 persons) a net acre; and that at any density above this there must be cramped gardens or a proportion of higher buildings. Flats can be built, with almost every convenience except direct access to the ground and private garden space, at much higher densities. In big cities tower-blocks of 10 to 20 storeys are built at up to 60 flats (200 persons) an acre. In general, however, for reasons of constructional cost as well as of acceptability, the density is of the order of 40 flats (about 133 persons) an acre; and it is rare that this is exceeded in the smaller towns.

The effect of combining in one scheme varying proportions of flats and terrace houses is shown in the following table (flats at 120, houses at 45, persons an acre):¹

<i>Combined Density</i> (Persons per acre)	<i>Houses</i> (45 p.p.a.)	<i>Flats</i> (120 p.p.a.)
45	100%	Nil
50	84%	16%
60	61%	39%
60	61%	39%
75	36%	64%
100	12%	88%
120	Nil	100%

CONCLUSION ON SIZE AND DENSITY

We think we have made clear the factors pointing to an optimum or norm for a new town of a population of about 50,000 and a density of about 15 persons a town acre. This cannot be a universal formula, but it is useful as a sort of datum from which the gains and losses of variations upward and downward can be measured. If, for example, it were thought genuinely advantageous to have a number of large industrial establishments in one place, so advantageous in productive efficiency as to make it worthwhile for many employees to spend daily more than

¹Here is a simple formula for finding what proportions of dwellings (or persons or rooms) of two types at different densities are possible at a given combined density:

Let h = No. of units (e.g. houses) of first type
 f = " " (e.g. flats) of second type
 a = Density per acre of first type
 b = " " " " second type
 t = Total No. of units
 i (or other number) = Area of site in acres.
 (Obviously $t - h = f$)

Formula: $\frac{h}{a} + \frac{t-h}{b} = i$

Example: Combined density (t) is 40 dwellings an acre; density of houses (a) is 14; density of flats (b) 60. Find number of houses and of flats on 1 acre.

$$\frac{h}{14} + \frac{40-h}{60} = 1$$

$$\therefore 60h + 560 - 14h = 840$$

$$46h = (840 - 560) = 280$$

Result: No. of Houses per acre 6.08 (15.2%)

$$\therefore \text{No. of Flats } (40 - 6.08) \text{ } 33.92 \text{ (84.8\%)} \\ \hline$$

Total No. of Dwellings 40.00 (100%)

half an hour in travel, the town could be bigger without necessarily reducing garden sizes. Alternatively, a number of towns could be placed (still with green belts) near enough to each other to facilitate reasonably short exchanges of movement—which seems to us the wiser plan. But it should not be assumed that the size of industrial units is ungovernable; a minor margin of productivity does not in principle justify a major cut in the space for the home environment—the end-product of all industry. Moreover some industrialists hold that there are managerial advantages in limiting the size of local establishments. In any case, Britain has many very large towns; we ought not without compelling reasons to add to their number.

In our discussion of town size we have stressed the primacy of the home environment as an end-product of human effort, for the reason that the trends of urban agglomeration, and of opportunist actions to ameliorate certain of its inconveniences, are inimical to this major interest. Re-emphasis on the home does not however imply indifference to the social and cultural aspects of living. No one could question that large assemblages of population so disposed as to facilitate diverse associations and interchanges are necessary for the more highly organized institutions of society. But though a regrouping with more towns of moderate size and less intensely massed central cities might change the cultural pattern to some extent there is no reason to think it would reduce its overall richness. Certainly there are elements of culture by common consent indispensable, such as higher education, the theatre, orchestral music, and market complexes, that could never have developed or been maintained in villages or small towns isolated in sparsely populated regions, because they require fairly large numbers of specialised personnel in organized groups with expensive buildings and equipment. The same is true of some popularly-desired institutions of culture such as dog-tracks, race-courses, major dance-halls, and (at the moment) bingo-saloons and skittle-alleys.

Yet it does not follow that the million-city, continuously built up, is necessary for a rich and comprehensive culture. In the past some supreme achievements emerged in towns we should now consider small. Shakespeare and his famous contemporaries found audiences and players in a London of under 75,000 (even with its suburbs under 200,000); Beethoven, Schubert, Mozart, Ibsen and Grieg in still smaller places; Goethe and Schiller in a Weimar of 6,000. And before Weimar had topped 15,000, Liszt made it a European musical centre, and produced there Wagner's *Lohengrin*—rejected by the populous capitals. The famous centres embracing all the arts from opera and drama to painting and sculpture, Florence, Venice and Dresden, had at their most glorious periods populations of less than 200,000. According to Johnson, London in the eighteenth century, then a metropolis of 500,000, held 'all that life can afford'. If the great Doctor knew that it also held some things that other moralists would think a good life need not afford—such as Casanova's 'infamous' Charpillon and Boswell's girl friends, he is not

on record as saying so. It is no part, however, of the function of town-planners to be moral censors. Our business is to propose to society an arrangement of towns and countryside that will make *possible* a good private life, healthy and pleasing surroundings for everybody, efficient economic activity, and as rich and varied a community culture (amateur and professional) as is consistent with these fundamentals.

Not everybody in a nation wants to share in the particular forms of culture characteristic of the modern metropolis, which show aspects of deterioration as well as of advance. Many find outweighing advantages in relatively small communities, and not a few in the deep country as far as possible from towns. But even for the most urban-minded 'all that life can afford' might well be provided in an inter-connected regional galaxy of towns with a total population of a million or so. The embarrassments that arise by expanding a metropolitan region to five, ten or fifteen millions are not compensated by an equivalent gain either in economic efficiency or social culture. The law of diminishing returns operates in urban size as in many other matters.

BRITAIN'S DRIFT TO THE SOUTH

The movement from the land to towns, common to all industrialized states, is accompanied in Great Britain by a trend from north to south that produces economic and social disadvantages at both ends of the process, and has now become a major issue of political concern. Its causes are more easy to discern than to correct. Climate, if a factor at all, is a minor one: the difference in mean temperature between the northern industrial centres and London, for instance, does not often exceed 2° centigrade. Much more important is the fact that the towns in the old textile manufacturing and coalfields districts were built at a time when standards of urban housing were at their worst and care for social and recreational amenities at a minimum. Of still greater importance is the more rapid expansion of the later and lighter types of industry and commercial and service businesses characteristic of the London region as the governmental, financial and luxury centre. Because the northern regions have never obtained a proportionate share of these classes of occupation to replace the decline in the older basic industries, they have in general much higher rates of unemployment.

There is great vitality and a rich reservoir of manual and mental skills in the north; and its political pressures, aided by some national sympathy, have led successive governments to seek to promote the settlement of new industries in areas of serious unemployment. Since the 1930's efforts have been made in this direction by the provision of modern factory estates, better housing, and financial inducements to firms, coupled since the war by a restriction of factory expansion in overcrowded centres. But the total effect of these measures has so far been inadequate.

Only in the last few years has it been widely understood that regional anaemia and regional plethora are symptoms of the same national

disease—the maldistribution of population and industry. At long last the discomforts and self-pity of London and the West Midlands have raised their languid sympathy for the north to active concern; and a revolutionary wave of thinking is sweeping through all political parties and, not less significantly, through the many government departments hitherto stabbing independently at separate elements of the problem.

LOCATION OF INDUSTRY AND POPULATION

Once again the Town and Country Planning Association, under a new generation of enthusiasts, is giving a strong lead to public and authoritative opinion. Having made careful quantitative studies of the situation in the London region¹, the West Midlands, the North-west and the North-east, and held a series of widely representative local conferences, the association has formulated practicable proposals for decentralization and redevelopment based on realistic assessments of the amount of 'overspill' required for decent central renewal and future population growth. Able academic experts and political study groups have taken up the subject, and along with a flood of books and pamphlets of uneven competence there are now signs of a fair consensus of opinion and of a new orientation of government policy.

The TCPA recommendations do not envisage the impossible ideal of a large-scale transfer of population and industry from the plethoric to the anaemic regions. They accept the present weight of population of the London region, for example, and recognize even that some further natural growth must be allowed for—not however in the conurbation itself, but in new and expanded small towns beyond its jealously safeguarded green belt. At the same time everything possible must be done to prevent further in-migration, and to promote the transfer of industry and office business to less crowded parts of the country. To achieve this a firm restriction of the expansion of employment in and near the conurbations must be coupled with the creation elsewhere of 'urban magnets' strong enough to attract firms and workers and to be economically, socially and culturally viable.

These 'magnets' should be conceived rather as regional complexes than as single very large towns. Some of them can be based on existing provincial centres, partially redeveloped in such a manner as to make them more efficient economically and more acceptable environmentally to the rising aspirations of the people, and having their own green belts and constellations of planetary towns. There is, and will continue, much debate as to the limits of size of the regional centres and their satellites. But in principle the conception that seems to be emerging is that of Howard's 'social cities'. If, however, desirable density standards and convenient access between homes and workplaces are to be attained, more attention should be given than at present to the factor of scale.

In a changing world no book on urban planning can be entirely up to date. As this one goes to press the Ministry of Housing announces its

¹See *The Paper Metropolis* (TCPA, 1962).

intention to designate three more new towns under the Act of 1946 for the West Midlands and Merseyside, and foreshadows a second crop of new towns for the London region, further out than the first eight. Legislation is also proposed for some restriction on the expansion of commercial offices in central London, and a committee has been set up to study the possibility of a transfer of some government departments to other parts of the country. Lamentably late and weak as these proposals are in relation to the need, they mark an advance in the recognition that it exists.

The wheel of progress grinds all too slowly: *Eppur si muove!*

Chapter X

ANTAGONISMS TO NEW TOWNS

'Bring me my rows of close-packed streets!
Bring me my hopes of fewer births!
Bring me my flats, my city walls!
Bring me my maps of barren earths!'

—*Jerusalem Replanned*.¹

FOR many years after Howard propounded it, the garden-city or new-town concept was regarded by nearly everybody as an ideal, beautiful but sad to say impracticable—too good to be true. Since its practicability has been demonstrated, it has encountered opposition from sections of opinion well-placed politically, well organized, skilful in advocacy, but narrow in economic and social outlook. Through their propaganda a widespread belief has been produced that building new towns will involve an inordinately large sacrifice of agricultural land, endanger food supplies, and destroy the beauty of the countryside. To avoid these disasters, it is argued, the townspeople of Britain, present and future, must be housed and rehoused with a maximum of compactness—that is to say mainly in high flats at the greatest possible density.

These apprehensions and proposals, which have had a lamentable effect on housing and planning policy, are based on a grossly defective sense of scale, which it is our purpose here to correct.

THE ARGUMENT ABOUT 'SAVING LAND'

No one would dispute that economy in the use of land, as of any of man's resources, is desirable. Nor is it to be denied that the greater the density of fresh urban development, the less the acreage that has to be subtracted from agricultural, wooded and other unbuilt-on land. Thus there is necessarily some conflict of interest between crowded townsmen who need more space for living, and countrymen (farmers and rural residents) who want to keep from building as much of the countryside as they can; and this conflict is accentuated by the growth of population.

Granted the necessity of urban expansion in some form, however, the creation of new towns, or the planned enlargement of existing country towns, especially if located in areas of relatively static or sparse population, brings considerable benefits to the countryside. It is unfortunate, therefore, that new towns have drawn more fire from countryside defenders than the secular suburban sprawl, although new towns are

¹F. J. Osborn: *Can Man Plan? and Other Verses* (1959).

really much more 'compact' than the run of suburbs. No doubt this is because the outward creep of suburbs has been adventitious and often absorbs land already depreciated in 'amenity' by its nearness to previous developments, whereas new towns are seen as deliberate, even wanton, incursions on land of unspoiled rural character. They are feared as the storm troops of the urban invasion.

When Dr. Dudley Stamp's admirable Land Utilisation Survey was first published it was argued reasonably that every effort should be made to avoid building on the very small area of the highest-quality land (6·8% in England and Wales). But later the proposed embargo was extended to all 'good agricultural land' (44·2%), which would make the siting of new development an impossible obstacle race. And there is a tendency among a fringe of 'ultra-preservationists' to press for high urban densities—'building up'—to save every possible inch of rural land. It is this extreme attitude that we deplore as inhumane and misguided.

The amount of rural land that could be saved by 'building up' has been wildly exaggerated. Estimates of the number of overcrowded people that ought to be dispersed from British cities vary from 1½ million to 3 millions—the latter a maximum not likely to be achieved. But even if 3 millions are rehoused in new towns or expanded small towns, with workplaces, open spaces and all other urban facilities, they will absorb, at 15 persons a town acre, only 200,000 acres.

To this must be added the land needed for the increase of population, now estimated at from 5 to 7 millions in the next 20 years. Allowing for some rather more compact rebuilding in parts of old towns and villages now having exceptionally low densities, this extra population (on the same new-town standards) may absorb another 400,000 acres. Thus altogether about 600,000 acres will meet the 20-year urban requirement. There are other drafts on rural land—for roads, mineral workings, airports and reservoirs—but they are relatively small.

Precise figures of land uses in Great Britain are not yet available¹, but roughly the distribution in 1962 was as follows:

	<i>000 Acres</i>	<i>Per Cent</i>
Farm land (crops and grass)	28,500	50·7
Rough grazings	17,500	31·1
Forests and woodlands	4,000	7·1
Total 'non-urban'	50,000	88·9
Towns and small settlements	3,000	5·4
Isolated dwellings	650	1·2
Country roads and railways	700	1·2
Waste and unaccounted for	1,853	3·3
	56,203	100·0

¹See, however, the careful study in *The Changing Use of Land in Great Britain*, by Robin H. Best and J. T. Coppock (1962).

Of the 50 million acres of rural land, further urban development for 10 million persons at new-town density standards would absorb about $1\frac{1}{4}$ per cent. In England and Wales, taken separately, the percentage would be somewhat higher: perhaps 2 per cent.

What the advocates of 'building up' fail to realise is the minuteness of the fraction that could be 'saved' by this expedient, and its colossal financial cost.

It is always the space for housing that land-savers propose to cut. Few think it practicable to reduce the acreages for factories, shops, schools and playing fields. But if as many as a million more townsmen (300,000 families) were housed in high flats at 150 instead of in terrace houses (with ten per cent of low flats) at 50 persons an acre, the 'saving' would be about 13,333 acres, or one-3,750th of rural land. The cost of housing would be increased by something like £240,000,000, the greater part of which, to equate rents, would have to be covered by Government subsidies. (The figure seems fantastic, but let the reader check it! It amounts to £18,000 for each acre 'saved'.)

NEW TOWNS AND FOOD PRODUCTION

The delusion that dispersal to new towns endangers Britain's food supplies was for years sedulously fostered by spokesmen for agriculture, and with especial ingenuity by the National Farmers' Union. Frightening figures were published of the quantities of potatoes, milk, loaves of bread, or mutton-chops lost for ever when 1,000 acres of farm-land were taken for housing—no offset being conceded for garden produce, and no interest taken in the huge extra capital cost of the high-density alternative. The scare thus created has recently been relieved in thoughtful circles by the careful studies of the experts of Wye Agricultural College,¹ but it continues to disturb the minds of many people.

Here again it is the popular sense of scale that is at fault. British agricultural output between 1937/38 and 1960/61 (23 years) increased by 60 per cent (at 1945/46 prices), though the area of improved farm land declined by 730,000 acres, that is by $2\frac{1}{2}$ per cent. In the same period the area of rough grazings, as shown in the returns, increased by 1,621,000 acres, and of forest land by 620,000 acres.

In the past ten years (1952/1962) total agricultural output has grown by about $2\frac{1}{2}$ per cent per annum, while the absorption of land for development has been about 30–40,000 acres per annum. Not all this is taken from improved farm land, but even if it were, the subtraction is less than 0.141 per cent per annum. Of the total of farm land, grazings and forests it amounts to 0.08 per cent per annum, or 1.6 per cent in 20 years.

The common impression, due to alarmist propaganda, that Britain's agricultural land is disappearing at a calamitous rate is sharpened by casual observation over limited fields. The percentage loss is certainly

¹G. P. Wibberley: *Agriculture and Urban Growth*, London, 1959.

R. H. Best: *The Major Land Uses of Great Britain*. London, 1959; R. H. Best and J. C. Coppock, *op. cit.*

greater in, for instance, South-East England and the West Midlands. Though this does not much affect the overall food-supply equation, it does point to the desirability of checking, and if possible reversing, the trend of population and development towards these regions.

FOOD FROM DOMESTIC GARDENS

In comparing 'building up' with low-density development, garden food production should not be overlooked. Domestic produce may be of less economic importance to the average family than it once was, but it is still substantial; moreover it is easily expanded in times of war or unemployment.

At densities of 120 or more persons an acre (all in flats) there can be little or no garden food produce. But at 45 persons an acre, the produce from 14 gardens, at 2s. a week each (a conservative estimate) is worth £72 16s. od. a year a housing acre.

The output of British agriculture in 1960/61 averaged £48 an acre of improved farm land, without any deduction for the yield from rough grazings.

It is true that in this calculation the garden produce is valued at retail prices and agricultural produce at farm-gate prices; but this is justified, since on the former all costs of distribution and transport are saved. Further, the home gardener does not require the £11 an acre subsidy paid to the farmer and included in the latter's £48 an acre receipts.

LANDSCAPE AND 'AMENITY'

Sensitive observers have been deeply offended in recent decades by the deterioration of the visual scene in parts of Britain; and a vigorous movement has come into being to defend the beauty of the country and lessen the ugliness of the towns. Led by the National Trust, which preserves particular places and buildings of aesthetic or historic value, extended by the zeal of the Councils for the Preservation of Rural England, Wales and Scotland, and lately reinforced by Duncan Sandys' Civic Trust, this movement has done much to open the eyes of an easy-going nation to the injuries inflicted on its landscape. These take many forms: ill-placed buildings, bad or incompetent architecture, abandoned mineral workings, spoil-dumps, military camps, unsightly advertisements and signs, the neglect and destruction of trees, and so on. The movement has enlisted many leaders of thought, literature and politics, and is now immensely influential in its noble objective of preserving and enhancing environmental amenity.

Unfortunately the word 'amenity' is often used utterly vaguely. It is a meaningless abstraction unless related to the feeling of some person or persons. When therefore it is discussed as a subject of public interest, the numbers and classes of persons who experience the 'amenity' necessarily come into the argument. To take an example: a man's sense of solitude in a fine landscape is for him an amenity—an exalting exper-

ience, especially for a city-dweller. A throb of this feeling comes to the writer in recalling a lonely walk up Scafell Pike before the first world war. Years later, walking up Scafell Pike again, he found himself in the company of a hundred others; it was still a grand experience but not quite the same. Today he might be one of a long queue throughout the expedition, and perhaps find a snack-bar on the summit. The sense of amenity given by solitude is thereby certainly lessened. (That of the grandeur of the scene remains.) Though no-one can now at all seasons so surely find Wordsworth's 'bliss of solitude' in that place, is the totality of the subjective delight less than it was? Only a supreme egoist-exclusionist could answer No to that question. For him there are too many people with similar tastes in the world. He may fulminate to himself and to the order of things. But he is in a difficult position in arguing his grievance in society.

The extreme preservationists are in the same difficulty. E. M. Forster's charming family in *Howards End* are resident in a beautiful district. They love the settled and gracious agricultural countryside that extends in all directions around their home. The distant views; the sense of space and peace; the quiet rural rhythm in which they and their ancestors have lived; the whole familiar environment is to them a very precious amenity: one that must be diminished, indeed destroyed for them, if the new town of Stevenage extends over their domain. Naturally they resist the advent of more people into their surroundings; and they have on their side the consideration that the new people cannot gain the special beatitude that they themselves will have lost—the essence of which is isolation from any large concourse of human beings. They can also claim that the pleasure they enjoy continuously, as residents, can be enjoyed ephemerally by visitors who walk or drive through the place (provided not too many do so); and this is, of course, an argument of social validity. But even if we add to the pleasure of the few permanent residents that of occasional transients, does it compare quantitatively with the total amenity sensed by hundreds or thousands of new residents removed from squalid slums or tenements to houses in more open surroundings? Admittedly the emotion these people will enjoy continuously may be in an important degree less intense than that of the Howards End family or the transient visitors. But the total experience of amenity must be immeasurably greater.

Fortunately it is possible to retain the amenity of open landscape and quietude, for permanent rural residents as well as for passing observers, in by far the greater part of the countryside. As we have shown, new urban development on decent standards need not take in 20 years more than about one or two per cent of rural land, within which limited area the distinctive amenity enjoyed by present residents will be replaced by amenities enjoyed by millions. The amenity of 98 per cent of the present open countryside can be, and ought to be, preserved for the benefit of all. Given that the nation's creative designers retain (or recover) the skill that combined with nature produced the beauty of our

landscape, there must be an enormous overall gain in personal pleasurable experience.

GREEN BELTS AND COUNTRY BACKGROUND

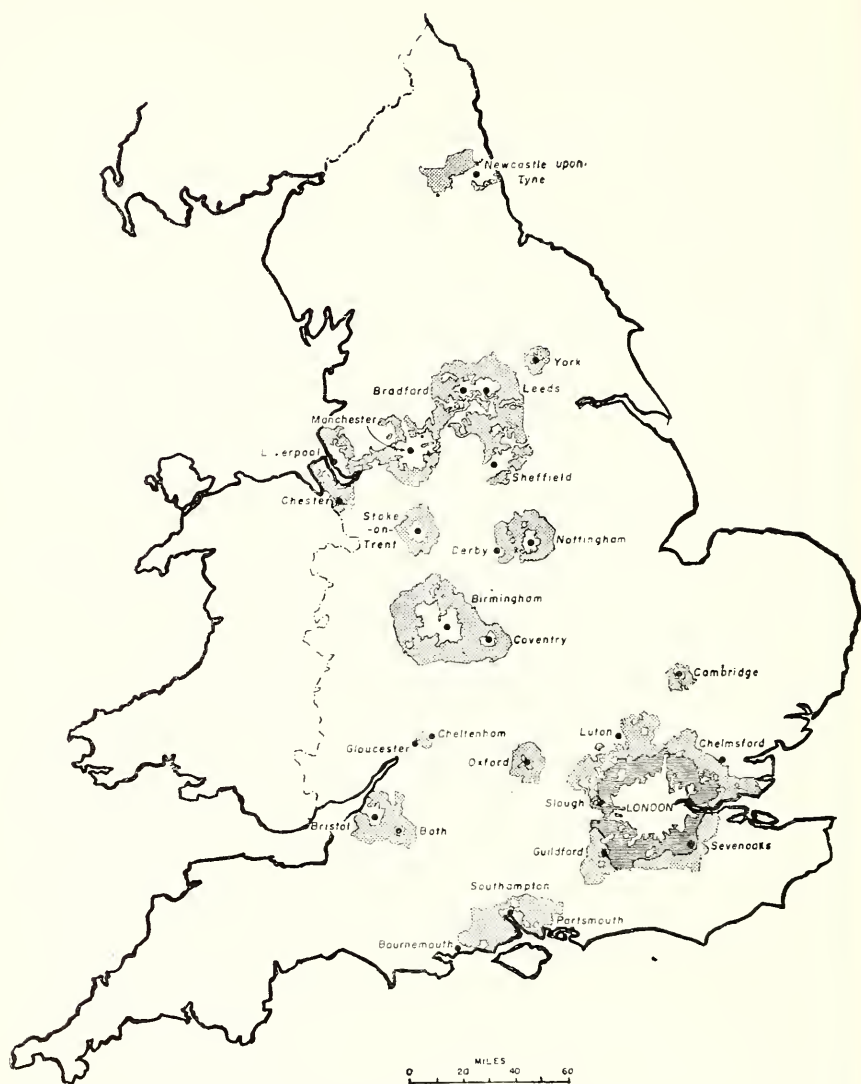
The image of towns as relatively compact settlements spaced out at intervals on a more sparsely inhabited background of land devoted mainly to agriculture or woods is, in a more or less indefinite way, commonly held. The very idea of a differentiation between 'town' and 'country' implies this pattern. Historically the arrangement arises from the convenience of the grouping of persons associated in crafts and trades within walking distance, and the necessity of interchange between these groups and the more diffused food-producing households, who had to be reasonably near, but did not need to be all within walking distance. It was a useful by-product of this natural arrangement, so long as towns were small, that the town-dwellers could engage in recreations, sports and military exercises in surrounding fields—which explains, no doubt, why so many towns neglected to reserve open space for such purposes within their own boundaries. There is no reason to think that early town inhabitants valued compression or a sense of being walled-in (what some aesthetic writers now call 'urbanity') as an amenity. It is more likely that they simply tolerated close quarters inside their towns, so long as they could easily reach ample open spaces outside them. (We discuss the concept of 'urbanity' below.)

There is evidence that in the past (in Biblical and classical times, for example) an area of open land immediately around the town was often reserved by royal or public authority against building.¹ This may have reflected a common desire, or assumption, that the growth of a town ought to be limited, though there are few examples in history of successful limitation, except where it was dictated by some such necessity as the exhaustion of the food supply obtainable from a town's related agricultural area. Too often the suburbs of a growing town jumped the official green belt and spread beyond it. And later many towns grew so prodigiously that they absorbed the open land between them and neighbouring towns or villages, and culminated in the modern conurbation.

The concept of the green belt, as a sort of protective ring, an assurance that some element of natural grace and opportunity for recreation should remain within reach of town-dwellers, seems to have persisted, or to have recurred at various periods. It was certainly present in many projects for British-American and Australasian colonies.² Though it is doubtful whether the founders of colonial towns, or the theorists and projectors of ideal communities (with the exception of Sir Thomas More) envisaged any general planning pattern for the size and placing of towns in relation to countries or regions, the implications of their ideas are of great interest in the light of modern urban developments.

¹See F. J. Osborn, *Town and Country Planning*, 1953.

²See John Reys: 'The Green Belt Concept', *Town and Country Planning*, July, 1960; F. J. Osborn, *op. cit.*



Green Belts in England and Wales in 1962

FIG. 5—In 1955 the Minister of Housing and Local Government asked Local Authorities to consider the establishment of clearly defined green belts. This map shows those which are approved in principle. The darker inner belt around London has been more definitely approved.

The crystallization of the concept of the rural belt as a permanent element in the town-country arrangement is due to Ebenezer Howard and the garden city movement. The principle was practically applied at Letchworth (First Garden City) and was expressly connected with the proposal that the ultimate size and population of a town should be definitely limited. Howard did not conceive the agricultural belt as an exiguous ringlet beyond which further urban growth should be free for all. He thought of it as part of the countryside at large—as an area protected by quasi-public ownership because only by this means could other agencies be prevented from building on country land made attractive by the presence of his new town. His intention was that when the garden city reached its planned maximum population other detached towns would be founded with similar limits. The planning pattern implied was well defined in the phrase of Howard's brilliant follower Sir Raymond Unwin: 'Towns on a background of open country.'

The green belt idea has become highly popular in Britain, and is rapidly gaining acceptance in other countries. Among country-dwellers it is welcomed as promising protection for large areas of rural land against suburban sprawl and unplanned or sporadic building. Town-dwellers, for their part, are collectively desirous that the open country on their immediate fringes shall remain intact; but individually many of them passionately desire to live in pleasant places within commuting distance of town occupations. Thus there is a considerable conflict between collective and personal pressures. The principle of the green belt has been officially adopted in British planning policy (through a bold decision by Duncan Sandys when Minister of Housing and Local Government) since 1953, and large areas have been defined as green belts in many county plans.¹ But in the governmental policy the principle is still that of reserving a protective ring around conurbations and towns considered to be at or near their limits of permissible expansion. This is a sound first step; it protects the rural land most urgently in danger from urban expansion. It does not, however, yet amount to a clear national policy of 'towns on a background of open country'. The reservation of rings of limited depth around towns in which employment and population are still increasing could lead merely to a displacement of suburban expansion to greater distances.

THE FETISH OF 'URBANITY'

Attempts have been made by architectural writers to discredit the two garden cities and the new towns influenced by their design on the ground that they lack 'urbanity'. Because the buildings in them are generously spaced and interspersed with gardens, lawns and trees, they rarely produce the particular effect of absolute enclosure or packed picturesqueness not undeservedly admired by visitors to many ancient

¹See *The Green Belts*: Ministry of Housing and Local Government. HMSO, 1962.

towns. This is true; it is another and a more popular kind of beauty, as well as a healthier and more convenient form of layout, that the new towns exhibit. But it is none the less truly a 'town' effect. The criticism reveals in those who make it verbal confusion and aesthetic narrow-mindedness. If the word 'urbanity' is used in the accepted sense of 'good manners' or 'educated tastefulness', the charge that the new towns are without it is an affront to the well-qualified architects who have taken part in their design. If it is used in the simple etymological sense of 'towniness', the users unjustly accuse themselves of crass ignorance of the infinite diversity of shape and character—openness, compactness, ugliness, beauty, healthfulness, squalor, culture, vulgarity, etc., etc.,—that the world's towns display. And if it is used (illegitimately) as a synonym for high urban density or crowdedness ('cosiness' and 'snugginess' are among the further synonyms) it stands for a quality most townspeople regard as a drawback and escape from if they can. This word 'urbanity' has been so maltreated that it should now be eliminated from town planning discussions.

Tastes differ in town pictures as in all the arts, and judgment of their merit is complicated by changes in fashion, to which practitioners and critics of the arts seem more subject than people in general. Rapid changes in fashion are inconvenient in architecture, as they are not in women's costume, because buildings last much longer than dresses, and even than women. Persons vary in stability of taste: for some a thing of beauty is a joy for ever, for others a joy till next month's issue of an architectural periodical. Fashion indeed can replace the very concept of the Beautiful by that of the Contemporary. But it is not our business here to battle with the *Zeitgeist*.

The new towns have been obedient to the prevailing architectural fashion. Luckily for the profession, the average Briton, though not highly sensitive to architectural design, does not mind it, so long as the things he really cares about in a house or a town are attended to. He takes great pleasure in gardens, trees and flowers, with which the new towns are well endowed. The outlook from his windows (the 'room with a view') is more important to him than the look of his dwelling from the street. And though he would have preferred his dwelling to have some element of individuality, he accepts harmonious design and grouping without resentment. Thus, given due respect for his major interest, a pleasing ensemble is attainable.

On the whole the managers of the new towns, when living on the job and in contact with those they are housing, have held the line against the outside pressure of over-anxious land economisers and devotees of 'urbanity'.

NATURAL RESISTANCES TO DISPERSAL

The relief of congestion and over-centralization in old cities is not the only motive for the creation of new towns; they are also a means of accommodating an increase of population. It is understandable that

authorities of existing large towns have not been enthusiastic for either limitation of their growth or withdrawal of some of their citizens and businesses. Historically growth has been associated with prosperity, and its absence with a dread of positive decline in rateable value leading to financial disaster. In many towns new industrial and commercial enterprises are welcomed, and systematic efforts made to attract them. Not unnaturally, therefore, municipal authorities, even when only mildly ambitious for further growth, tend to resist positive proposals for dispersal.

This resistant attitude is slowly changing, through a wider appreciation of economic facts and social interests. It begins to be realized that increases in rateable value may be more than offset by the costs of street improvements, higher-density rehousing, and extra space for schools and recreation. This realization would have come sooner if the local burden caused by growth had not been largely transferred to the national taxpayer by Exchequer grants and the differential subsidies on high-density housing.

Another natural resistance to planned dispersal is the anchorage or rootedness of persons and businesses in their present situations. A removal is not only costly; it also disrupts existing relationships and habits. Many persons and businesses, however, will readily move from a less to a more advantageous situation, and in fact most of the new towns have had no great difficulty in attracting both residents and industries. Recently, also, some have had success in attracting office businesses.

The discovery by patient sociologists that there are little clusters of working-class people long resident in crowded cities who are neighbourly, and that some who have moved to good suburban housing estates feel friendless and unhappy, is no news to housing managers, doctors, or parsons. Cases of distressful loneliness are to be found in any place. They are notoriously prevalent in great cities. And they occur to some extent in new towns too, though nowhere are more organized efforts made to bring people together. In our own experience social integration and neighbourliness are at a higher level in new towns than in most old towns; the very fact that many families arrive simultaneously from different places gives them a common interest in making new associations. It is often more difficult for a newcomer to an established society (for instance an old cathedral town) to gain acceptance and to feel at home. Thus it is in the pioneer stage of a new town that the community spirit it at its maximum.

Sympathy with the close ties that exist in a crowded neighbourhood—the attachment to Mum and Dad, the corner shop, and so on—is admirable. But continuous outward migration is compelled by simple biological facts. Without it a crowded precinct would, through natural increase, become ever more and more crowded. There must come a limit. In practice the pressure causes some families or persons to hive off spontaneously. We guess that these are usually the more prosperous and ambitious people of the neighbourhood: what Abercrombie called



FIG. 6—The eighteen new towns of Great Britain designated 1946 to 1963. Three more at least are to be designated in 1963, Runcorn in Cheshire about 12 miles east of Liverpool, Redditch in Worcestershire about 7 miles south of Birmingham, and another in the Manchester area.

'the better elements'—though we would not endorse a definition implying a slur on people who like to stay put.

Slum clearance, socially necessary, involves compulsory displacement, usually with little or no choice in the future dwelling. Moving to new towns is voluntary, and the evidence is that very few families want to go back on their decision.

POLITICAL RESISTANCES

Governmental promotion of new towns involves the compulsory purchase of rather large parcels of land, mainly rural, owned and occupied by many persons. Though a fair price has to be paid, there is inevitably disturbance of the interests and habits of owners, farmers and local residents, and the odium of this falls on the promoters. In the usual case of acquisition for public purposes, it is the initiating local authority or statutory agency that incurs the main odium; the Ministry figures as the uncommitted deity impartially weighing the arguments for and against before approving or rejecting the project. Though there is always a local public inquiry at which objections are fully heard, when the Ministry is promoter as well as final arbiter it has no one with whom to share the odium. Neither the political chiefs nor the civil service administrators enjoy being in that position, especially if there are influential and vocal supporters of the party in power in the place chosen for a new town. Moreover it is an open secret that many sites considered suitable by the Ministry of Housing have had to be forgone through the intransigent opposition of the Ministry of Agriculture.

The first 14 towns were started by the Labour Government of 1945–1950, which had its major electoral support in the urban industrial constituencies. It has been suspected that the later Conservative Government's disinclination to promote further new towns was due partly to dislike of the odium to which we have referred, and partly to the fear of a change of balance of voting strength in the rural counties. Conversely, Labour members for urban centres are supposed to have feared the effect on their majorities of outward migration. On balance, any party losses or gains in towns and rural counties might have been expected to cancel out; but sitting members on both sides would not necessarily be consoled for the loss of their own seats by their party's gains in other seats.

Too much should not be made of this suspicion. If some sitting members did have such anxieties, the 1959 election results did not justify them, nor the hopes of contenders for their seats. Though there was a large increase in the county electorates of the eight towns round London, and in Corby, the local swing to the Conservatives there was much the same as in the rest of the South-East. Labour majorities certainly declined in crowded urban areas, not enough however to cause serious losses; they increased in the safe Labour seats in which Glenrothes, Peterlee and Cwmbran are situated. The only new town situated in a county division where there was a Labour gain was East Kilbride,

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

and the change there merely reflected the general 'swing' in Scotland.

We doubt if either party has been much influenced, in a matter so vital to good urban development, by local electoral considerations. But party managers may have been reassured to find that neither has in fact been disadvantaged by the migration to new towns.

Chapter XI

ACHIEVEMENT, EMULATION AND PROGNOSTIC

‘Nations, no less than persons, want to keep up with the Joneses.’

—*New Towns: The Answer to Megalopolis*, Chapter III.

WE claim full success for the first stages of the British experiment in creating new towns. That is not to say they meet every possible requirement of every kind of human being, every personal or associated activity in urban civilization. No town, old or new, is perfect in this sense; none ever will be. But in fundamentally important respects these towns mark an immense advance on any type of industrial towns that preceded them. They provide their inhabitants with good homes in healthy, pleasant and well-planted surroundings, never far from the open country and in most cases near their places of work. They are centres of efficient and advancing industry and commerce. They are equipped with modern urban services, schools, shops, churches and public buildings. And they are financially sound; not only more economical to construct and maintain than any alternative type of development, but positively remunerative as capital investments.

That they do not contain the immense variety of professional entertainment and of certain forms of culture assembled in very large cities is true. But it does not follow from this that they are on balance less satisfactory to their inhabitants in general. No town, large or small, can conceivably provide within easy reach of everybody all the facilities theoretically desirable, as we have shown in Chapter IX. The advantages of one kind of environment necessarily involve the loss of some of those of other kinds. For millions of city-dwellers, for instance, the delights of the suburban home are purchased at the cost of long daily journeys to work and abstinence from frequent participation in central city enjoyments. For others, easy access to numerous theatres, art galleries, luxury restaurants and night clubs involves the sacrifice of the amenities of the country-side, of open-air sport, of the garden, of the sense of being a personality in a community, even of optimum physical health for themselves and their children. No doubt there are many people who genuinely like one of these two metropolitan patterns of living; plenty of big cities will remain to satisfy their demands. But there are more, we believe, who prefer the middle way between concentration and diffusion that is offered by the moderate-sized, reasonably open, partially countrified town, with a good yet not exhaustive urban equipment.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

INDUSTRY AND COMMERCE

Since no community can survive without a sound economic basis, the settlement in the new towns of manufacturing and commercial businesses has been of the first importance. In the sixteen that are now firmly established there is every sign of permanent viability in this respect, and in most there is already a considerable diversity of classes of employment. Industries in a competitive economy cannot be wholly static: new ones emerge, some expand, some decline, some fail. So far the experience of almost all the new towns has been one of lively industrial expansion, sometimes outpacing the provision of housing, as we have noted earlier, and some of them now have to restrain the influx of additional firms. In general managements are well pleased with their location, apart from complaints of labour shortage—not peculiar to new towns in a state of nearly full employment. Employees on their side show much enthusiasm and little discontent; very few have left any of the towns through dislike of the environment. The great majority of inhabitants work locally, though naturally there is some interchange of employment between towns within commuting range of each other, both of householders and of members of their families. The retail businesses of the towns are as prosperous and expansive as the manufacturing businesses; some of the towns indeed are (unexpectedly) becoming major shopping centres for extensive regions.

DIVERSITIES AND SIMILARITIES

In their overall planning and in the layout of residential and industrial sections and main and subsidiary shopping centres, the new towns, while studious of good precedents, have also made interesting innovations. Some of these are described in our chapters on the individual towns; some are experimental; not all will commend themselves for widespread acceptance; some indeed we think ill-judged. But the fact that fifteen independent teams of administrators and technicians have had the chance to develop whole towns on their several conceptions and estimates of popular requirements has produced a diversity of solutions worth close study by planners of future towns and redevelopers of existing towns.

Certain common problems have emerged. One is that of the adequate provision of private garages and public parking-places for automobiles, the number of which, in Britain as elsewhere, has multiplied beyond expectation since the towns were started and is now, in prosperous areas, approaching an average of one car a family, with the two-car (even three-car) family already emerging. Relatively low density has made it less difficult than it might have been to adapt the older housing sections to this new need, but it is not easy. In the latest housing units many towns now think it advisable to allow for an average of one car a family.

Though in some of the towns the aberrant idealisms of 'urbanity' and 'saving land' have pushed densities too high, on the whole the popular

preference for the single-family dwelling has been respected. Terrace housing of two-storey houses at from 12 to 16 (here and there 18) an acre prevail, and there are sections of free-standing or semi-detached houses at 8 down to 2 an acre, mostly owner-occupied. The proportion of flats usually ranges from five to ten per cent; in one or two towns it rises to 15 per cent. In the few cases where high tower-blocks have been introduced the main motive has been the desire for 'vertical features' to punctuate a landscape felt to be too level, or (in reversion to an eighteenth century taste) 'to terminate the prospect'.

NEIGHBOURHOODS AND FUNCTIONAL ZONES

For the shopping centres the idea of the pedestrian precinct, anticipated as 'a possibility' by the New Towns (Reith) Committee, is now often applied; and there are some very attractive examples, with large adjoining car-parks. While it cannot be said that the car-parking problem has been fully solved, it is less intractable in new towns than in densely-built great cities.

All but one of the towns have adopted the principle of neighbourhoods varying in population from 5,000 to 10,000, usually with at least one junior school, a group of shops and service work-shops, and a public house and some facilities for meetings. Minor centres are indispensable for access to schools and convenience in every-day shopping. But their effectiveness in creating 'neighbourhood' consciousness seems to vary; and there are some observers who think the generous provision of social facilities in local sections of a town may weaken the development of its main cultural centre—an issue that calls for continual study.

The factory zones of the towns, appropriately enough in this industrial age, yield some of their most striking architectural effects. We spend today far more capital on manufacturing and commercial structures than on cathedrals, churches, theatres, town halls and museums; so the propensity of entrepreneurs to value a touch of 'display' in their workplaces is to be welcomed. The design and grouping both of the small sectional factories for letting and of the larger ones built for individual firms (by themselves or the corporations) reach a high standard and make them one of the towns' impressive visual features as well as their main economic base. Moreover the daily experience of working in gracious, well-appointed and attractively landscaped factories, must be having a tremendous effect on the employees' standards of aesthetic appreciation, certain to be reflected in the furnishing and care of their homes.

PUBLIC AND COMMUNITY BUILDINGS

Of the public buildings the most noticeable, because most numerous, are the county schools—primary, secondary, and for further education. With a few temporary lapses, the provision of these has kept pace with the exceptionally high proportion of children of school age; and they

are first-class in design and accommodation and have as a rule ample and well-laid-out space for recreation.

The building of churches in new communities is a heavy burden on the religious organizations, since in Britain it is not financially aided, as it is in Sweden for instance, by the State. There were initial delays that had to be mitigated by temporary makeshifts. Admirable cooperation between the denominations, however, has conduced to a careful placing of the new churches, which though mostly modest in scale now make pleasing additions to the architecture of the towns. Designs are varied and often original and ingenious. One useful expedient resorted to is the sealing-off of the consecrated part of the church building so that the main area can be used for secular community purposes.

Public houses (licensed to sell alcoholic drinks), an important element in British social equipment, have also been the subject of good cooperation between the bodies interested in their provision—brewers, licensing authorities and corporations. Here again new ideas have been introduced. Some of the pubs serve the double purpose of refreshment houses and community meeting places, with obvious advantages for both functions. In one at least (in Hatfield) a welfare clinic is part of the complex.

All the towns now have their post offices, local government headquarters, banks, employment exchanges, insurance offices, dance halls, restaurants and libraries. Some of these are buildings of distinction. Major hospitals are under construction in several, usually to serve wider districts of which the new towns are becoming important centres. New cinemas are few, owing to the decline in the popularity of this form of entertainment, but no town is without at least one, and some have excellent concert halls and theatres for amateurs.

Playing fields and outdoor sports facilities are increasingly well provided for, and this is having a beneficial influence on recreational habits. Despite a degree of parsimony in the provision of halls and meeting-rooms for clubs and societies, innumerable activities of the amateur or 'do-it-yourself' type have proliferated, many quite spontaneously and others on the initiative of devoted social organisers appointed by the corporations. In Crawley, for instance, there are over 400 voluntary bodies; in Harlow, 400; other towns, if they made a count, would show comparable numbers. Especially for young people there are many organizations, though much remains to be done under this heading in view of the age-composition of the towns.

Past philanthropy and bequests have endowed long-established towns with buildings and facilities that in these days can only be financed out of public funds, and for relative shortages in this respect the local authorities, suzerain ministries and the Treasury compete in apportioning blame. However, with the addition of a few facilities that it will not be too difficult to provide as populations near their target and revenue surpluses grow, towns of the new type can become as satisfactory as the laws of space allow for a large percentage of the urban people of Britain, and, we hold, of the people of the world.

ACHIEVEMENT, EMULATION AND PROGNOSTIC

SOME FEATURES OF INDIVIDUAL TOWNS

Besides the basic components common to all British towns, each new town has features special to itself, arising from topographical characteristics or from the inventiveness of its promoters or citizens. Some of these are described in their separate chapters, but neither there nor here is it possible to mention them all. (The annual reports of the corporations and the files of local newspapers are available for more encyclopaedic historians.) Some (Stevenage, Welwyn and Harlow for instance) have in their master plans preserved drifts or wedges of natural woodlands striking almost into their centres. Welwyn has enclosed its beautiful Digswell Park Lake as a nature reserve open to subscribers of a small annual charge. Hemel Hempstead has converted a stream threading through its shopping centre into a charming water-garden. Harlow has developed a system of ways for walkers and cyclists with under-passes to avoid vehicular traffic, and a novel method of house-numbering—by precincts instead of roads. Peterlee has cleverly met its daunting problem of underlying coal-seams and possible subsidence by new types of free-standing houses on rafted foundations, and has engaged a famous painter (Victor Pasmore) to advise on an original conception of housing lay-out and design. Basildon has skilfully pulled together a scatter of shack dwellings miserably served by miles of grass-mud tracks. Cwmbran has integrated and partially harmonized a confused jumble of industrial buildings and houses on a difficult hilly site. Cumbernauld is adventuring on a complex multi-level shopping-residential centre designed to separate pedestrian and vehicular ways; its solution, though controversial, is of experimental interest.

Harlow, with generous aid from the Nuffield Foundation, has provided a complete town system of medical centres for its general practitioners and welfare services. Welwyn has transformed an old mansion into an arts centre for professional painters, sculptors, and textile and stained-glass designers; and Harlow has an arts trust that has embellished the town with sculptures by Henry Moore, Barbara Hepworth and others. We could go on, but these illustrations must suffice to hint at the variety of local features that already exist. New ideas continuously emerge to enhance individual character, as in all vital towns.

INTERNATIONAL INFLUENCE OF THE NEW TOWNS

The British idea of creating new towns, both as a corrective of urban overgrowth and as a means of catering for increases of population, has engaged intense interest and study abroad and is now gaining acceptance after a long period of misinterpretation. 'Garden city associations' were started in France (1903), Germany (1904), Holland (1905), Italy (1906), the USA (1906) and Russia (1911), and the International Garden Cities and Town Planning Federation (now the International Federation for Housing and Planning) in 1913. Unfortunately, as in Britain, the concept was obscured by the confusion between 'garden city' and 'garden suburb' to which we have referred. What Aber-

crombie called 'the admirable compromise between formality and semi-picturesqueness' in residential design that Raymond Unwin evolved at Letchworth and Hampstead had and still has wide and beneficial international influence. But because suburbs were made seductively easy to produce, by rapid transport, the new-town principle was disregarded. The innumerable so-called 'garden cities' built between 1904 and 1946, with rare exceptions, were not towns based on local employment, though they were a highly popular advance on the close-built dwellings and rectilinear street patterns of an earlier tradition.

There were in that period a number of developments by manufacturing firms for their employees, whose pedigree goes back to the factory villages of the nineteenth century rather than to the garden city movement, though many were influenced by its standards of design. There were also some 'satellite towns' with a measure of local industry that claimed garden-city paternity, the first of which was Hellerau, near Dresden (1908). Canberra, the federal capital of Australia (1909), planned by W. B. Griffin of Chicago, emulates, indeed exaggerates, the verdant character and spaciousness of Letchworth. The little towns and agricultural villages on the polders reclaimed from the Zuyder Zee are well planned and charming. In the main, however, the projects founded between 1904 and the second World War are essentially suburbs; hundreds of examples can be seen around European capitals and provincial cities.

In all the other continents too, and conspicuously in the Americas, there are countless garden suburbs showing the same influence, some of them planned as neighbourhood communities. A few in the USA—notably Clarence Stein's Radburn (N.J. 1928), a most imaginative creation, and the three Greenbelt Towns (1935-38)—were intended to have local industries, but were overtaken by the metropolitan flood and turned into commuters' dormitories. The small towns of the famous Tennessee Valley Authority (1934) have a local economic base and remain detached.

Between the two wars, in countries undergoing industrialisation, many new towns came into existence. In the USSR 800 or more were created; but until lately many of them seem, like the older cities, to have been allowed to grow without specified limits, to the depreciation of their initial plans. Russian technicians of today would doubtless agree that the form of these towns was too stereotyped and too regardless of topographical and sociological considerations. Under the pressure of a hasty pursuit of economic progress collectivism, like capitalism, tends to *laissez-faire* in social and aesthetic matters.

THE NEW-TOWN CONCEPT CATCHES ON

Since the end of the 1939-45 war and the adoption of the dispersal policy by the British Government the idea of building planned towns with local employment and of controlled size has been more widely entertained. The number of new towns and of urban satellites sited and

designed with some regard for scale and employment is already so great that we can only allude to a few examples. The literature of the subject has become a flood; no one can hope to keep pace with it. 'Everybody talkin' 'bout Heaven ain't goin' there', of course. But it is clear that we are at the opening of a new era in urban development.

Curiously enough, the USA, the nation with the direst need of a policy to cope with the fabulous growth of cities, and the most gargantuan literature of research and analysis, has not yet (1962) made any serious attempt to limit suburban sprawl or to relieve city constipation by planned dispersal, though the federal government has sought by its placing of defence contracts to promote a wider location of industrial development. The 'atomic' cities, Oak Ridge (Tennessee), Richland (Washington) and Los Alamos (new Mexico) are exceptional new creations. Post-war 'satellite towns' seem all to suffer the fate of Radburn; one of the best, Park Forest, 30 miles from the centre of Chicago, conscientiously planned with a section for future industry and good community facilities, is becoming engulfed in the spread of the metropolitan area. The three Levittowns are in the main vast and rather standardized suburban adjuncts to New York and Philadelphia. There are one or two promising commercial new-town projects: for instance, Peachtree City (1960) for 50,000 people, 30 miles from Atlanta, Georgia, which is designed for industry as well as residence. But the able advocacy of Lewis Mumford, Clarence Stein, Rex Tugwell, Carl Feiss, C. F. Palmer and others is still unsupported by a 'movement' equivalent to the TCPA, and there is no clear sign of a federal policy for dispersal.

In the USSR the main emphasis between 1945 and 1951 was on reconstruction necessitated by war damage. Since that date more attention has been paid to the control of town size, and British experience has been closely studied, though Russian standards of housing and ways of community living differ from ours. Satellite towns ('sputniks') are now planned beyond wide green belts around great cities: eight for instance for Moscow and six or seven for Leningrad. The USSR Academy of Architecture and Construction now envisages, as an ideal, central cities of not more than 200,000 to 250,000 with groups of detached planets of 40,000 to 60,000 each.

Israel is the country in which the principle of planned location of population and industry has recently been most logically pursued. Before the war far too large a percentage had been massed in three cities. Every effort is now being made to prevent their further expansion, and 24 regional centres of 10,000 to 60,000, with many smaller towns and villages, are included in a systematic national plan.

Another country with a population so dense as to prompt national guidance of location is the Netherlands. Here the political conditions make a logical policy more difficult than in the USSR or Israel; and some of the very large postwar satellite towns seem to be virtually

extensions of major cities of 'Conurbation Holland'. New towns of moderate size in less crowded regions are now contemplated.

France and West Germany have had to devote immense efforts to rebuilding war-damaged towns. Both have also built many planned satellites or industrial extensions of existing cities, but neither has yet essayed a determined attempt to check the growth of the greater ones. However in Germany some new industrial towns of moderate size have been founded, a number of them for refugees. And France has built new towns in connection with the natural gas and oil developments in the Pyrenees and North Africa, and by methods of taxation and inducements is endeavouring to transfer industries from Paris to less crowded provinces.

Italy, again, has placed most of its new planned developments as expansions of existing towns, sometimes partially industrial. It is not repeating the Fascist type of towns or villages founded between the wars on the Pontine Marshes and in North Africa, which were very rigidly planned and organized, with standardized houses of large and few rooms focused on the church, prefecture and party headquarters. But it has rebuilt many of its war-destroyed hill towns, usually on level land lower down. One of its most interesting new industrial towns is Ivrea, developed under the aegis of Adriano Olivetti, a great manufacturer who had an enthusiasm for planning respectful of family and social needs.

Sweden, paradise of the architect-planner, has redeveloped its capital with a more complete blending of technical and aesthetic considerations than any other country. The brilliant satellites, Vällingby and Fårsta, are not new towns in our sense, but extensions of Stockholm, with more high-rise dwellings than the British (and probably the Swedes themselves) would really like. They are impressive examples of integrated community development on land publicly owned. When Sweden takes to the building of true new towns it is likely to produce some of the best in the world.

Of China, still in the phase of basic industrialisation, we have not sufficient knowledge to generalize. In 1959 projects were announced for decentralization from Shanghai (7,000,000) to satellites of 100,000 to 150,000 on 'garden city principles'. Later it has been stated that millions of its population are to be transferred to more distant parts of the country. Japan has contemplated new towns for Tokyo-Yokohama (10,800,000), but we have no detailed reports of the action in progress.

India is building many new towns, of three types: state capitals, including Chandigarh for the Punjab and Bhubaneswar for Orissa; towns for refugees; and small industrial towns. Pakistan has at least one new town of the modern type. Both these countries are disposed to place as much as is practicable of their new industry in large villages.

Australia, where metropolitan concentration has been extreme, is now building a number of independent new towns; as also is Canada. Some of these are one-industry towns, but others, like Elizabeth (South Australia), are more widely based. Kitimat (British Columbia), for which

Clarence Stein is the consultant planner, is a genuine new town based primarily on the aluminium industry. Don Mills (Ontario) is of special significance as a well-planned and comprehensive development with good social facilities and an industrial zone, financed by a big commercial company—an emergent type of agency that may well undertake many new towns in the Americas if governments will assist by designating suitable sites.

NEW TOWNS PLANNED SINCE 1900

Limits of space and lack of up-to-date knowledge forbid an attempt to describe parallel developments in other countries. Reports of new foundations, of projects, and of theoretical discussions of the new-town principle arrive in mounting volume from all parts of the world.

The following is a list of some of those of which descriptions or mentions have appeared in many languages. We give approximate dates of foundation or projection, and stated target populations, so far as we know them. We have not been able systematically to distinguish between those that are completely detached or 'green-belt' towns, and those that are satellites or quasi-satellites of existing cities. But many, perhaps most, of them appear to have been planned in advance as distinct 'communities', and to have some basis of local employment that takes them out of the class of suburban dormitories pure and simple.

The date first given for each town is that of foundation, major planned expansion, or proposed creation, and in some cases is approximate. The figure that follows this date is that of the originally intended target or maximum population. Figures in brackets are recent actual populations.

Aden. Little Aden, oil and other industries, 1955.

Australia. Canberra, federal capital, 1910, 100,000. (1960, 55,000.)

Elizabeth, S.A., various industries, 1954, 50,000.

Kwinana, W.A., 20 m. from Perth, various industries, 1953, 40,000.

Lanceston, Tasmania.

Nepean, N.S.W., near Sydney, one of five projected satellites.

Rum Jungle, N. Territory.

Snowy Mountains, N.S.W., several towns, hydro-electricity.

Yampi Sound, W.A.

Austria. Lenzing.

Bechuanaland. Gaberones, administrative capital, 1961, 5-10,000.

Brazil. Brasilia, new capital, 1957, 500,000. (1960, 90,000.)

Cidade des Motores, 20 m. Rio de Janeiro, for tractor industry, 1947, 25,000. Now part Dugue de Caxias. (1960, 176,000.)

Volta Redonda, 90 m. Rio de Janeiro, steel and other industries, 100,000. (1960, 84,000.)

British Honduras. New capital, planned 1962, 5-10,000.

Brunei (Borneo). Seria, 10 m. Kuala Belait, oil industry, 12,000.

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Bulgaria. Dimitrovgrad.

Canada. In Canada many other one-industry towns have been founded since 1900. The following have planning interest

Ajax, Ont., light industries, 1941. (1953, 5,000.)

Arvida, P.Q., aluminium industry, 1926. (1953, 11,000.)

Bicroft,

Bramalea, Ont., 1960, 50-80,000.

Chapais, P.Q.

Chibougamau, P.Q., mining and lumber, 1952, 1,500+.

Deep River, Ont., atomic power, 1945. (1953, 2,000.)

Don Mills, Ont., adjoining Toronto, 1952, 35,000.

Elliott Lake, Ont., uranium industry, 1955, 20-30,000.

Flin Flon, Manitoba, copper and gold mining, 1929. (1953, 10,000.)

Honeymoon Bay,

Kapuskasing, Ont., pulp and paper, 1921. (1953, 5,000.)

Kitimat, B.C., aluminium, pulp, and other industries, 1952, 50,000. (Completely planned new town.)

Manitouwadge, Ont.

Murdochville, P.Q., copper and gold mining, 1927. (1953, 10,000.)

Prince Rupert, B.C., 1909, 100,000. (1962, 11,000.)

Shefferville, Quebec.

Uranium City, pitchblende mining, 1952. (1958, 2,000.)

Ceylon. Cal-Oya Basin, several small towns, 1950.

Chile. Huachipato, 1950, 35,000.

China. Shanghai, six towns projected, 1959, 100-250,000.

Kaili, Kweichow province, 1956.

Czechoslovakia. Gottwaldov (Zlin).

Bratislava, four new towns projected at 6-mile intervals, 1961, 25-30,000.

Poruba (New Ostrava), 26,000.

Denmark. By PÅ Nordels, engineering industries, 1959, 16,000.

Copenhagen, two satellite towns projected, 1961, 250,000 each.

Finland. Imatra, projected 1960.

Rovaniemi, capital, Lapland, rebuilt 1945-52, 20,000.

Tapiola Garden City, 6 m. Helsinki, 1952, 17,650. (1962, 10,500.)

France. Bagnols-sur-Ceze, 1960.

La Dame Blanche, Paris, 1960, 25,000.

Grande Quevilly, satellite Rouen, 1960, 25,000.

Monceaux, Pyrenees, oil industry.

Orleans, 12 km., new satellite university town, 1962, 25-30,000.

Rocher Noir, Algeria, new capital.

Royan, Gironde, completely rebuilt, 1957.

St. Dizier-le-Neuf, major extension, 1950, 60,000.

Sahara, several new towns, oil industry.

Germany, East. Stalinstadt-on-Oder, 1954, 30,000.

Hellerau, near Dresden, 1908, 15,000 (industrial suburb).

Germany, West. Altenhof.

Amorbach.

Espelkamp-Miltwald, Westphalia, 1948, 20,000. (1962, 10,000.)

Haar, 6 m. Munich.

Hochdal, 12 km. Düsseldorf, light industries, 1961, 30-35,000.

Heitlingen, 6 m. Hanover, project 1961, 25,000.

Köln-Nord, industrial quasi-satellite of Köln, 1960, 80-100,000.

Marl, chemical and other industries, 1914, 100,000.

Neckarsulm-Amorbacherfeld, automobile industry, 1950, 5,000.

Neugablonz, one of a number of new industrial towns for refugees. 1954, 60,000.

Salzgitter, steel industry, 1938, 130,000. (1962, 30,000.)

Sennestadt, near Bielefeld, various industries, 1954, 20,000. (1962, 14,000.)

Überherrn, Saarland, steel and coal, 1960, 15,000.

Wolfsburg, Volkswagen centre, 1937, 100,000. (1962, 130,000.)

Wulfen, heavy industry, 1960, 50,000.

Ghana. Akosombo, 1960, 30,000. (1963, 9,000.)

Tema, Volta River port, 1954, 25,000. (1963, 48,000.)

Greece. New capital projected, 1962.

New villages for refugees, 1946 and later.

Hong Kong. Tsuen Wan, planned satellite, 1956, 175,000.

Hungary. Bucharest, satellites projected.

Komlo.

Sztalinvaros, steel industry, 1950.

India. Bhadravati, Mysore.

Bhubaneswar, Orissa, new capital.

Chandigarh, Punjab, new capital, 1952.

Faridabad, 17 m. Delhi, 1959.

Ghandidam, Cutch, for refugees.

Jamshedpur, Bihar.

Nilokheri, Punjab, for refugees.

Patiala, Cutch, for refugees.

Rajpura, Cutch, for refugees.

Ulhasnagar, Bombay.

India in 1952 projected a programme of 100,000 villages for 67 m. people.

Indonesia. Djakarta, several satellite towns, 15 miles out.

Israel. Affuleh (Jezreel, 1925).

Ashkelon.

Beersheba.

Hazor-Jafed.

Hedera.

Kiriat-Gat.

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Kiriat-Shemone.

Tiberias.

Wadi-Faliq.

Yoknam, 1952.

Israel founded, 1933–1948, 200 Kibbitzim (collective settlements) and Mosharei Ovdim (co-operative settlements).

Italy. Ivrea, near Turin, 1952.

Villaggio Cardinale Ruffino, near Palermo, Sicily.

Pontine Marshes, new towns, about 1930.

Japan. Tokyo-Yokohama, satellite towns 15–30 m. from city, 1956.

Senriyama, near Osaka-Kobe, 1962, 150,000.

Nagoya region, satellite towns projected, 10–20 m. from city, 1962.

Kenya. Kisumu, port on lake Victoria, various industries, 1903. (1958, 21,000.)

Nairobi, capital city, 1900. (1960, 250,000.)

Nakuru, 97 km. from Nairobi, agricultural-industrial centre, 1904. (1962, 24,500.)

Libya. Beido, new capital.

Balbo's new towns, about 1930.

Malaya. Petaling-Jaya, 7 m. Kuala Lumpur, 1951, 70,000.

Morocco. New towns under Lyautey regime, 1913 onward.

Netherlands. Alexanderpolder, adjoining Rotterdam, 1962, 175,000.

Beverwijk-Ijmuiden, 1956, 150,000.

Bylmermeer, adjoining Amsterdam, 1960, 100,000.

Emmeloord, N.E. Polder, 1943, 10,000 (with villages, 40,000).

Hilversum, 10 m. Amsterdam, 1915, planned expansion from 35,000 to 100,000. (1960, 100,000: extension projected.)

Hoogvliet, near Rotterdam, 1962, expansion from 7,000 to 20–50,000. (1962, 7,300.)

Ijmond, heavy industry, expansion from 46,000 to 150,000. (1956, 46,000.)

Lelystad, in new polder, with industry, 1962, 15–20,000.

Vlaardingenvestwijk, near Rotterdam, 1950, 150–200,000.

Vreewyk, Rotterdam, garden suburb, 1913.

Zuyderzee polders: many new small towns and villages, 1920–1963.

Pakistan. Nazimabad, 'first satellite town', 1950.

Punjab, 5 market towns, Thal Development Area, 1949.

New villages, 650 planned, 1948–58, average 500.

Peru. Ventanilla, 20 m. Lima, for industry, 1961, 70,000.

Other satellites projected, 1948.

Poland. Nowa Huta, adjoining Cracow, 1949, 120,000.

Nowe Tychy, Silesia, 17 m. Katowice, 1947, 130,000.

Many smaller towns founded since 1945.

Portugal. Alvabade, near Lisbon, 1950, 45,000.

Rhodesia, Northern. Lusaka, capital founded 1930. (1963, 84,000.)

Rhodesia, Southern. Kariba, for dam construction, 1955, 10,000.

Rumania. Many medium-sized towns developed with modern industries. At least six are new towns planned since 1945: Bicaz, Oresti, Orasul Dr. P. Groza, Otelul-Rosa, Victoria, Vulcan.

Santa Lucia. Castries, capital, rebuilt after destruction, 1949, 32,000.

Singapore. Queenstown, 1958.

South Africa. Allanridge, O.F.S., gold mining, 1950, 25,000. (1963, 10,000.)

Cato Ridge, Natal, ferro-manganese industry.

Carltonville, Transvaal, gold mining.

Sasolburg, O.F.S., oil, chemicals, 1952, 47,000. (1963, 13,800.)

Stilfontein, Transv., gold mining, 1949, 25,000. (1962, 23,000.)

Tugela Basin, Natal, industrial town, 1960.

Umlazi, near Durban, 1951. Uvongo, Natal.

Vanderbijl Park, steel and others, 1949, 200,000. (1962, 48,000.)

Virginia, O.F.S., gold mining.

Welkom, O.F.S., gold mining, 1946, 100,000.

Westonaria, Trans., gold mining, 1938, 75,000. (1963, 28,000.)

Witbank, near Pretoria, 1951.

Spain. Many planned agricultural villages, 1946-60, 2-3,000.

Sweden. Boliden, nr Skellefteå, mining. (1951, 2,500.)

Gustavsberg, near Stockholm, ceramics, 1940?

Kortadala, satellite of Gothenberg, 1959.

Märsta, nr Stockholm, air-port and inds., 1957, 40,000.

Oxelösund, iron and steel, 1958. (1963, 11,700.)

Stockholm, planned quasi-satellites: Årsta, 1945, 23,000; Fårsta, 34,000; Vällingby, 1950, 60,000.

Tunisia. Katania, 1950.

Uganda. Entebbe. (1960, 8,000.)

Kampala, commercial centre, 1913. (1962, 47,000.)

Jinja, hydro-electricity, textiles etc. (1962, 30,000.)

Tororo, mining, cement and other industries.

U.S.A. New 'urban communities' (of 2,500 upwards) rapidly emerge; 3,708 since 1900. Some are really suburbs; some 'company towns'. Few are New Towns as defined in this book.

The following are of some planning interest.

Clear Lake City, Texas, 15 m. Houston, industry and research, 1963, 150,000.

Columbia Basin, Washn., 11 small towns, hydro-electric, 1933.

Country Club, Kansas City, planned community, 1906.

El Dorado Mills, Calif., 25 m. Sacramento, defence and other industries, 1962, 75,000.

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Deltona, Florida, N.W. of Cape Canaveral, 'space industry' and residential, 1963, 75,000.

Fontana, Tennessee Valley, dam and tourism, 1942, 2,000.

Foster City, Calif., 11 m. San Francisco, various industries, 1962, 40,000.

Greenbelt, Maryland, 1937, 30,000. (1962, 8,000.)

Greendale, Wis., 1937, 20,000.

Greenhills, Ohio, 1937, 10,000 or more.

Irvine, 40 m. Los Angeles, university, 1960, 100,000.

Jefferson Valley, Westchester, N.Y., 1958.

Kingsport, Tenn., planned new town, 1916.

Kohler, Wis., 1913.

'Levittowns': (1) Long Island, N.Y., 1947, 100,000. (1960, 65,000.) (2) Bucks County, Pa., 1952, 100,000. (3) Willingboro, N.J., 1953. (1960, 12,000.) (Planned owner-occupier projects for commuters.)

Lincoln Village, Ohio, industrial satellite, 1953, 10,000. (1962, 6,000.)

Longview, Wash., 1923.

Los Alamos, N. Mex., atomic energy, 1942. (1962, 13,500.)

Mariemont, Ohio, planned satellite, Cincinnati, 1922.

Navajo Villages, New Mex. and Arizona, 1962, 2-3,000.

Norris, T.V.A., dam and research, 1933, 5,000. (1942, 1,400.)

Oak Ridge, Tenn., atomic energy, 1947, 50,000. (1960, 27,000.)

Park Forest, Ill., 1948, 36,000. (1962, 31,000.)

Peachtree City, Ga., 30 m. Atlanta, for various industries, 1960, 50,000.

Radburn, N.J., planned community, 1928, 25,000.

Reston, Virginia, 18 m. Washington, residential-industrial, 1963, 75,000.

Richland, Wash., atomic energy, 1943. (1960, 23,500.)

Rockland Village, N.Y., some local industry, 1955, 4,500.

San Diego, Calif., new university city, 1962, 100,000.

Silver Bay, Minn., iron mining, 1951, 5,500. (1960, 3,700.)

Sunset, 10 m. Sacramento, various industries, 1962, 150,000.

Terra Linda, Calif., 1950.

U.S.S.R. Very many new towns and planned extensions to towns have been founded in the Soviet Union in the period under review (see text). In the context of this book the most interesting are the 'sputnik' (satellite) towns under construction and projected for Moscow (including Krujkovo, 1960, 65,000) and for Leningrad (including Ostradno, 1958, 50,000). As a guide to future writers on the subject we subjoin a list of other towns or town-extensions of planning interest which have been mentioned in publications since 1945.

'Agrotowns', Ukraine and Urals, 10,000.

Akademgorodsk, Siberia, suburb 'for scientific research'.

ACHIEVEMENT, EMULATION AND PROGNOSTIC

- Almalyk, Uzbekistan, metal and other industries. (1959, 41,900.)
 Almetievsk, Tatar ASSR, oil and other industries, 1950. (1959, 49,000.)
 Angarsk, Siberia, hydro-electric and various industries, 1948. (1961, 154,000.)
 Angren, Uzbekistan, coal mining and other industries, 1941. (1959, 55,000.)
 Bratsk, Siberia, electric power, timber. (1961, 63,000.)
 Chermovgrad, Lvov.
 Chernikovsk, Bashkiria, 1944 (now part of Ufa).
 Chirchik, Uzbekistan, machinery, clothing, food, 1932. (1959, 65,000.)
 Djerzhinsk, Gorky region, chemicals etc. (1959, 164,000.)
 Djerzhinsk, Ukraine, mining and coke. (1959, 45,000.)
 Dubna, Moscow region.
 Dudinka, Krasnoyarsk, port town on Yenesei River, 1951. (1959, 16,400.)
 Elektrostal, Moscow region, steel. (1962, 105,000.)
 Gukovo, 1940. (1959, 65,000.)
 Igarka, Siberia (Krasnoyarsk), port on Yenesei River, 1929. (1959, 14,300.)
 Intazh, Arctic circle, 1947.
 Iskimbazh, Bashkir.
 Jorngi-Er, Tashkent.
 Karaganda, mining, engineering, etc., 1934. (1959, 397,000.)
 Katchnakar, Urals.
 Kazanzhik, Turkmenia, railway workshops, brickyards, carpets. (1959, 8,000.)
 Kemerovo, Kuznetsk Basin, engineering, chemicals, food and other industries, 1918. (1961, 298,000.)
 Kirovsk, Murmansk region, mining. (1959, 38,400.)
 Kohtla Jarve, Estonia, shale mining. (1959, 29,200.)
 Komsomolsk-on-Amur, iron and steel, etc., 1932. (1959, 77,500.)
 Komsomolsk, Kuibyshev.
 Kospash, near Perm.
 Kriviroz, Ukraine.
 Leninabad, Tajikistan, silk and textile industry.
 Lisavorsk, Kazakhstan.
 Magadan, on Sea of Okhotsk, port and various industries, 1933. (1959, 62,000.)
 Magnitogorsk, Urals, iron and steel, engineering, 1929. (1961, 328,000.)
 Mingechaur, Azerbaidjan, power, engineering, 1948. (1959, 33,000.)
 Molotovsk, 1946.
 Monchegorsk, Arctic circle, nickel mining, etc., (1959, 45,500.)
 Nakhodka, fishing, canning, ship repairs, 1950. (1961, 71,000.)

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- Norilsk, Siberia (Krasnoyarsk), mining, smelting and other industries, 1953. (1959, 108,000.)
- Novaja Kakhovka, Ukraine, hydro-electric and various industries, 1951. (1959, 19,000.)
- Novokuibyshev, 23 m. Kuibyshev, oil refining and other industries, 1952. (1961, 72,000.)
- Novovolynsk, near Lvov, Ukraine, coal mining and building materials. (1959, 23,800.)
- Novotroitsk, Urals, 'green belt town', iron, steel and building materials, 1940. (1961, 64,000.)
- Oktjabrsk, Kuibyshev, Volga, port and building materials, 1956. (1959, 33,800.)
- Oktjabrsky, Bashkiria, oil, engineering, 1946. (1961, 68,000.)
- Rustavi, Georgia, satellite of Tbilisi, various industries, 1948. (1961, 70,000.)
- Salavat, Bashkiria, petrochemicals, engineering, building materials, 1949. (1961, 68,000.)
- Stalinabad (now Dushanbe), capital of Tajikistan, 'socialist garden city'. (1962, 264,000.)
- Stalinogorsk (now Novomoskovsk), Donbas, mining, chemicals, etc., 1931. (1961, 112,000.)
- Stalinsk (now Novokuznetsk), Kuznetsk basin, engineering, 1931. (1962, 410,000.)
- Stavropol, Kuibyshev region, port, engineering and other industries, 1955. (1961, 78,000.)
- Sumgait, Caspian, 1949. (1959, 52,000.)
- Taishet, Irkutsk region, 'major centre', steel. (1961, 32,000.)
- Tamir-Tau, Kazakhstan, steel, chemicals, etc., 1945. (1959, 54,000.)
- Volzhski, Volga Dam, 1954. (1961, 71,000.)
- Vorkuta, 150 m. N. of Arctic circle, coal mining, 1947. (1961, 59,000.)
- Zhukovsky, Moscow region, 1956. (1959, 42,300.)
- Venezuela.* Guayana, 1962.
- Yugoslavia.* Novi Beograd, extension of capital city, 1950, 200,000.
- Ploce, Adriatic, new seaport, 1954.
- Velenje, 1955, 30,000.
- Zeleznik.

Incomplete as the above list is at the date of writing (1963) it is more than sufficient to illustrate a world-wide movement. Not all of these towns, of course, have been directly inspired by the British initiative.

But as the international exchange of ideas and experience in planning is incessant, all must have been influenced by it. Many are in turn studied by British planners.

FUTURE OF THE WORLD'S TOWNS

Planned towns, satellite extensions and city renewal projects are appearing in so many regions of diverse character, that the influence of the British garden cities and new towns on the pattern of urban development is now becoming more and more entangled with that of later ventures. Britain cannot yet be said to have exploited fully the possibilities of its own invention, and some other countries may well go ahead of us in this respect. But Britain can claim to have set going a great movement that promises immeasurable benefit to urban man.

Not that urban man and his expert advisers have yet abandoned the idealism of the Great City. Faiths and fetishisms outdated by advances in science, education and social ethics may retain loyal priests and medicine-men for generations. There are still planners who cling to the belief, or hope, that by devising intricate road and rail networks on, below and above ground level, and creating multi-deck centres having separate pedestrian channels, million-cities can be made agreeable containers for production, trade, personal living and a high culture, without much reducing their population capacity. Theorists of this solution are divided in opinion as to whether the city millions can be or ought to be induced to give up private cars and become neatly-packed commuters, perhaps straphangers, in mass conveyances. Beginnings of renewal by rationalized congestion can be studied in central Philadelphia and in Stockholm, where it has a certain mechanistic-aesthetic appeal, or in Los Angeles, where it suggests the hashish dream of a fanatical motorist. Probably no-one would accept the core of Los Angeles, where two-thirds of the surface is given over to the automobile, as a model for the social and cultural nuclei of civilization; it can be argued that it is an experiment that can be improved upon. But what will be the end-term of the more sophisticated solution if cities continue to grow? We envisage it as a structure resembling a stupendous transport terminal, with paved platforms and courts, elevators and escalators leading up and down to tiers of supermarkets, restaurants, bars and saloons for mass-entertainment, wherein an amorphous swarm of passengers will scurry about among offers for sale of 'all that life can afford'—except quiet, repose, sociability and contact with the living earth.

Now this is a way of life that we know has its coterie of ardent lovers.¹ There are congenital megalopolitans. And let us congratulate them on their prospects, for many cities are likely to go that way. The human propensity to accept a long-set trend, and the genuine difficulty of a revolutionary reversal, forbid us, as realists, to expect a sudden wholesale conversion of authorities and technicians. We (and they) know also

¹See for example Jane Jacobs: *The Death and Life of American Cities* (1962), a nostalgic idealization of certain of the older parts of central New York.

that the far more numerous city-dwellers who dislike this type of renewal can be counted upon to put up with it—for a time, anyway.

Such complexes, however, cannot be created on the necessary scale, or integrated with city-wide communication systems, without decisive governmental intervention and strong planning control, nor without a huge outlay of social capital. Before long it must be detected that these powers and resources could be more wisely and profitably employed in a systematic dispersal policy including the foundation of new centres, making possible the rebuilding of the old ones on a more human scale.

Another school of planners, more alive to the strength of the craving for the individual home, plot of land and private car, play with the idea of a thoroughgoing diffusion of great-city populations forecast by H. G. Wells in *Anticipations* (1901). In this pattern the tradition of the town as a local society, having faded to zero in mass-cities, is abandoned as obsolete and irrecoverable. Mobility and instantaneous communications are thought to have made geographical association far less, and functional or other selective association far more, dominant in human experience and disposition. Thus, it is said, there is no longer any point in the distinction between town and country: so long as people have pleasant homes, and well-planned places within motoring reach for work, shopping, exercise and entertainment, it is unnecessary that zones for all these purposes should be in the same town, or indeed in a town at all. They may have to travel considerable distances, but lots of them enjoy driving, and they might as well weave about in a regional criss-cross of roads as shuttle daily on six-lane speedways or crowded trains in and out of coagulated cities. Again this is an acceptable way of life for some. And again we have to recognize that the outer parts of many metropolitan regions are going this way, while at the same time the planners of their inner areas strive to entice the 'ex-urbans' back into central super-terminals.

If these two patterns are the only alternatives offered, we think the diffusionists will easily outbid the compressionists in a free market. There is truth in their view of the modern diversity of associative habits, and the growing insistence on space for living. But the town, if of moderate size, remains an institution of vital importance, not only as a highly convenient way of providing all sorts of services and facilities and as a means of minimizing the daily work-journey, but as in some measure a check on exclusive specializations in work and leisure and a progressive atomization of society. Just as a sensitive individual is enriched as well as constrained by the family, household, or work-circle, so, in the writers' opinion, he and these in turn, whether appreciative of it or not, are enriched as well as constrained by the unchosen associations of a local community. The latter also seem to us essential for the healthy working of an elective democracy, which suffers by a total lack of acquaintance between people of different selected interests. But we need not stress these quasi-sociological dicta. The practical convenience

of the moderate-sized town as against extreme diffusion is justification enough.

TOWNS FOR NEW POPULATIONS

The new towns concept was originally addressed to the rescue of overgrown cities from their present plight and disastrous trends. We have had to admit that at the best the rescue can be only partial; the mistakes and negligences of history cannot be completely obliterated. The existing million-cities, with slow and painful amelioration, will remain. There is a far greater question: will they, need they, be repeated in the new urban developments of the future?

According to temperament or philosophy, one may be terrified to despair or spurred to advocacy or action by the population forecasts for the rest of this century. Clearly there must be an end to the neglect of urban control; yet one is staggered at the thought of the number of new towns that will have to be created as control becomes effective.

Britain itself, a mere microcosm of the world situation, faces an estimated population increase of twelve to seventeen millions (23 to 33 per cent) in the next 40 years. That is the equivalent of 240 to 340 units of 50,000, in whatever sizes or types of towns or expansions they are grouped.

For the whole world the median projection of the United Nations is an increase of 3,350 millions (110 per cent) by the year 2000, of whom 2,300 millions are expected to be added to the urban population (in 1960 about 1,000 millions), and another 1,050 millions to the rural population (1960, 1,959 millions). That means the world has to increase its town-capacity by 230 per cent, equivalent to 2,300 one-million cities. The corresponding number of new towns or town-expansions of the order of 50,000, easily calculated, is so prodigious that one must feel unrealistic in doing the sum.

Yet in one form or another, unless the human race is catastrophically curtailed by pestilence or scientific warfare (which, even if anybody wants it, is not to be assumed) urban development on this unimaginable scale must occur. The practical question is: How much of it will be so placed and planned as to make for a good life for the people of the world, and how much of it will be allowed to flow adventitiously into existing and new huge agglomerations, with the sorry consequences for health, convenience, productive efficiency and the pursuit of happiness with which we are now all too familiar?

Chapter XII

STEVENAGE

IN the first interim report of the New Towns Committee of March 1946 reference was made to Stevenage, one of the satellite towns proposed by Sir Patrick Abercrombie, and it was suggested that, as a matter of urgency, an agency should be chosen for this town in advance of legislation. A draft charter for a corporation for Stevenage was drawn up for the committee by the Treasury Solicitor. However, following the second and final reports of the committee, the New Towns Act, 1946, provided necessary powers for establishing corporations to develop new towns.

Stevenage, 'as a matter of urgency', thus became the first new town to be designated—on 11 November 1946. Some significance may have been intended in that date, for the first new town under the Act might be seen as a step towards the better world, the better home environment and social conditions in the minds of so many at the end of both World Wars.

During the thirties the Stevenage Urban District Council had favoured plans for permitting the development of the existing small town from its population of 6,500 to about 30,000, and during the war officials of the Ministry of Town and Country Planning had been sketching plans for Stevenage as a possible prototype of future new towns. It was thus ripe for development of this kind. In the Greater London Plan Abercrombie had pointed out that the site is 'excellently located for transport', that it 'is tending to develop industrially and that there is ample land for industry on the west side of the railway'. He suggested that 'expansion should take place mainly on the east of the present town, leaving an area on the west of the railway for industry, where it is undesirable to have residential development'.

The site selected, of 6,100 acres, included the Urban District of Stevenage, and parts of the Rural Districts of Hitchin and Hertford.¹ The town centre is about 30 miles from the centre of London, on the North Eastern Region main railway line from King's Cross to the north, and on the Great North Road. The country is undulating, with a general slope towards the south west, which makes it a good site for a town. It has pleasant stretches of farmland and woodland. Fairlands Valley which runs across the centre of the site from north to south is a particularly pleasing stretch of lowland country which in the original plan was to be preserved.

¹Following boundary alterations only small parts of the Eastern boundary of the designated area are now in Hertford R.D.C.

THE OUTLINE PLAN

As early as 1946 a draft Master Plan was prepared by the Ministry of Town and Country Planning, which provided the basis for subsequent plans. Revisions were made up to its final adoption in 1950, and they continue to be made, but in broad principle the adopted plan has been the guide in building the town. It follows Abercrombie's recommendations of a total population of 60,000,¹ of the siting of the industrial belt west of the railway, and of the main expansion east of the existing town, although the expansion is also south east and south. As an example of the planning of a satellite town Abercrombie had prepared an outline plan for Ongar (Essex) with a population of 60,000, divided into six neighbourhoods of about 10,000 each, and in the plan for Stevenage this approximate size of neighbourhood is adopted. The town centre is placed south of old Stevenage and the neighbourhoods are grouped in a semi-circle round this centre, old Stevenage (1) with extensions to the east forming one neighbourhood to the north, then Bedwell (2) immediately to the east of the centre, Pin Green to the north east (6), with Chells (5) further to the east and Shephall (4) and Broadwater (3) to the south east. (The numbers indicate the order of building). Fairlands Valley separates Bedwell and Pin Green to the west from Chells, Shephall and Broadwater to the east (see plan). Each neighbourhood was originally planned with two primary schools, eight secondary schools being conveniently spaced throughout the town. Owing to the increase in maximum population most neighbourhoods will require three primary schools while the number of secondary schools has been increased to twelve. A County College of Further Education is situated near the town centre. Each neighbourhood has a shopping centre, where in many cases sites are provided for a church and a public house; and there are a few additional groups of shops in parts of the neighbourhoods away from the centres. Community centres are also provided in some of the neighbourhoods. All the principal town roads run between the neighbourhoods so that young children attending primary schools need not cross these roads. The plan shows a diversion of the Great North Road to the west of the industrial area.

Part of the green belt is included within the boundary of the designated area, on the north, south east and west; and it is hoped and expected that open country areas beyond the boundary will be preserved as such so that the town will enjoy a green belt of at least three miles wide.

The plan prompts certain criticisms, and it is doubtful whether it can be considered as good as some of the other plans for new towns. In one widely accepted theory the size of a neighbourhood should be governed by the capacity of a primary school, but in Stevenage each neighbourhood has two or three primary schools. If the neighbourhoods had been half the size, each would support one school, while it would have

¹Subsequently increased to 80,000. See thirteenth annual report of the Development Corporation 1960.

STEVENAGE

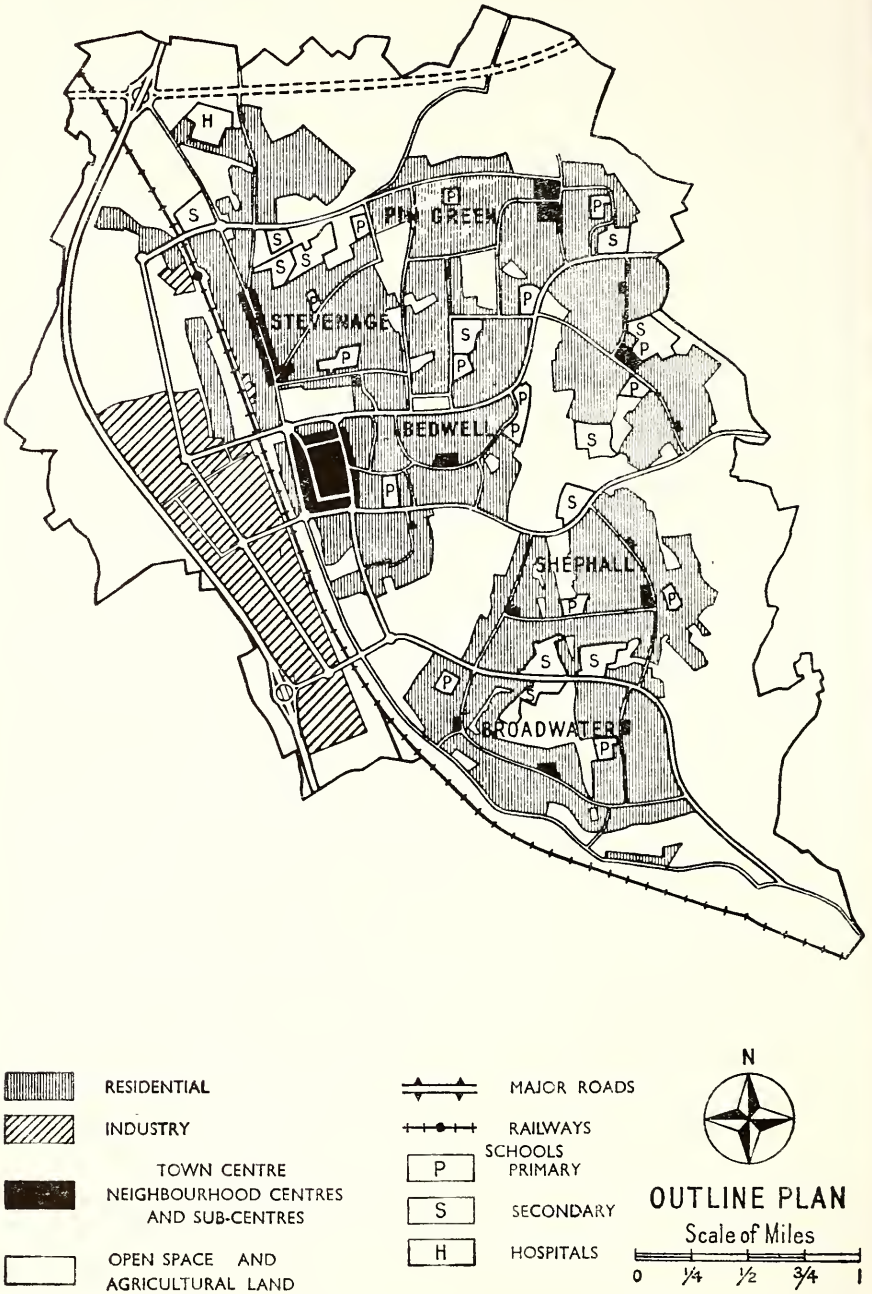


FIG. 7—The outline plan of each of the new towns is drawn to the same scale for the purpose of comparison.



(a) Folk dancers in the town square. The clock tower rising from a pool can be seen in the middle distance.

Plate 9. Stevenage.

(b) Stevenage shopping centre a completely pedestrian precinct. This is a view of the central pedestrian way running north south. Other pedestrian ways run transversely from it.





(a) Broadwater neighbourhood centre showing shops and St. Peter's Church.



(b) Standard three bedroom houses at Broom Barnes in Bedwell neighbourhood.

(c) Houses at Marymead in Broadwater neighbourhood.

Plate 10. Stevenage.





(a) Row of houses at Leaves Spring, Shephall neighbourhood. The echelon arrangement, with single pitched roofs and contrasting facing materials make an interesting and dramatic effect.

(b) St. Joseph's Roman Catholic Church, Bedwell.

(c) Houses round a courtyard and pedestrian ways in Chells neighbourhood: a modified form of the Radburn layout.

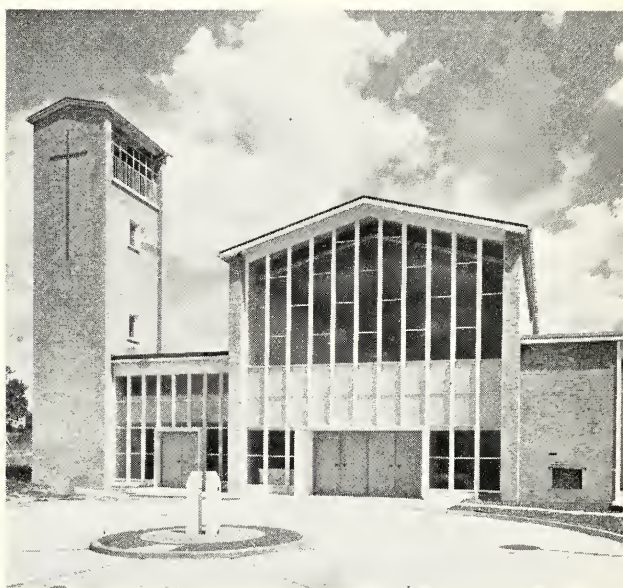


Plate 11. Stevenage.





(a) British Visqueen factory, one of many architecturally pleasing buildings in the industrial area west of the railway.



(b) Factory for Mentmore Manufacturing Co. Ltd., in the industrial area. Long low simple horizontal masses in a spacious setting.

(c) Entrance to school with a sculpture in bronze of a family group by Henry Moore.



Plate 12.
Stevenage.

obviated the necessity of having the small groups of shops in addition to those in the neighbourhood centres as these would have been adequate for smaller neighbourhoods as at Crawley. Another point of criticism is the placing of the town centre. This criticism was made by the Stevenage Urban District Council at the master plan inquiry in October 1949. The objection to the location of the centre, an objection which the explanations of the original draft plan do not meet, is that it is too far from the outlying parts of the town. It is, for example, two miles from the eastern areas of Broadwater, Shephall and Chells, which may be thought too far for a town of 60,000. As the District Council Surveyor said at the inquiry, 33,000 persons would live beyond $1\frac{1}{4}$ miles, 10,000 beyond $1\frac{3}{4}$ miles. The council suggested a site further east on higher ground, more in the geographical centre. If the centre had been where the neighbourhood centre of Bedwell is located it would have reduced by more than $\frac{1}{2}$ a mile the distance to the outskirts. On the other hand, the situation of the town centre places it near the railway where a new station is to be built, and it is easily accessible from the industrial area, but these considerations are surely less important than the convenience of the majority for whom the town is built.

One criticism frequently made, which, we think, has not the same validity is that it lacks compactness—that there is too much sprawl. This is accentuated by Fairlands Valley running through the town. But this generous use of land and mixing of trees and grass with houses helps to make life pleasant, and Fairlands Valley brings a stretch of very pleasant country right into the town. The opposition of many residents to the later proposal to build on it is significant. It confirms that there is a popular liking for the sense of constant contact with the natural world.

If the placing of the town centre can be criticised, there is little to criticise in the plan for the centre itself, which is excellent in every way. Here the desirable ideal of grouping shops in a pedestrian precinct with bus station and car parks close by has been realised. It is one of the finest of modern town centres and will be described in some detail later.

The location of the industrial area west of the railway (with railway sidings for many factories) and east of the new Great North Road met with some opposition, chiefly because, as originally planned, it meant the demolition of over 100 houses at the northern end of the site. The Urban District Council suggested that the industrial area should stop south of the residential development in Fairview Road, and proposed an alternative site north east of the town. The disadvantage of such a site was mainly of poor transport access: no railway and no main roads. Although there is natural sympathy with people having to be turned out of their homes—not, however, without being offered other and often better accommodation—it would have been unwise to allow this to spoil what is a very good location for an industrial area, having the advantages of proximity to the railway and the Great North Road, and easy access to the town centre, while being admirably suited for the purpose. However, a compromise was later reached by which Fairview

Road remains a residential area on the eastern outskirts of the industrial area and the extensive demolition of houses was thus avoided, while some new residential development has actually taken place there.

BUILDING THE TOWN

Although Stevenage was the first new town to be designated, building was a long time getting under way, and the first houses were not begun until September 1949, nearly three years after designation, and were not completed until 1950. Satisfactory progress has been made since that date. For example, by the end of 1952 1,070 houses had been completed and 2,367 were in process of construction, another 806 were finished in 1953, and in the following years a little over a thousand houses were completed annually, with the exception of 1957 when it was a few short of that number. By the end of 1962 about 12,377 had been completed, of which all but 1,177 were built by the Development Corporation.

There were two main reasons for the slow early progress of Stevenage. One was the economic crisis of 1947, from which all new town enterprises suffered. The other was the opposition from the old residents of the district, an opposition not absent at Crawley and Hemel Hempstead, designated a few months later, but particularly strong and persistent at Stevenage which delayed the start of construction.

A public inquiry was, of course, held before the designation order was made. Although the Urban District Council voted in favour of supporting the enterprise, three residents representing the Residents' Protection Association and the local branch of the National Farmers' Union brought a High Court action to have the designation order annulled on the grounds that the objections at the public inquiry had not been fairly considered. Heard in February 1947, the action was successful, but the decision was reversed in the Court of Appeal in March, and this was upheld in the House of Lords in July. The litigation meant delay in the preparation of detailed plans, because not a great deal could be done in the atmosphere of uncertainty occasioned by the first successful opposition in the High Court. Looking back on a case where the interests of the few were opposed to those of the many, it may be questioned whether the opposition could not have been handled with more persuasiveness and diplomacy by the Minister of Town and Country Planning. Nobody likes to be told that they are going to have the town whether they like it or not.

The civil engineering works—roads, water supply and other public services—are among the first things to be provided in building a new town, and some progress had been made with these in 1948 to 1950, and by 1952 the first new neighbourhood, together with the additions to old Stevenage, were well under way. By the end of 1956 Bedwell was nearing completion, Broadwater was about two-thirds completed, Shephall about a third, a start had been made on the town centre, and many factories had been built. By the end of 1962 these neighbourhoods

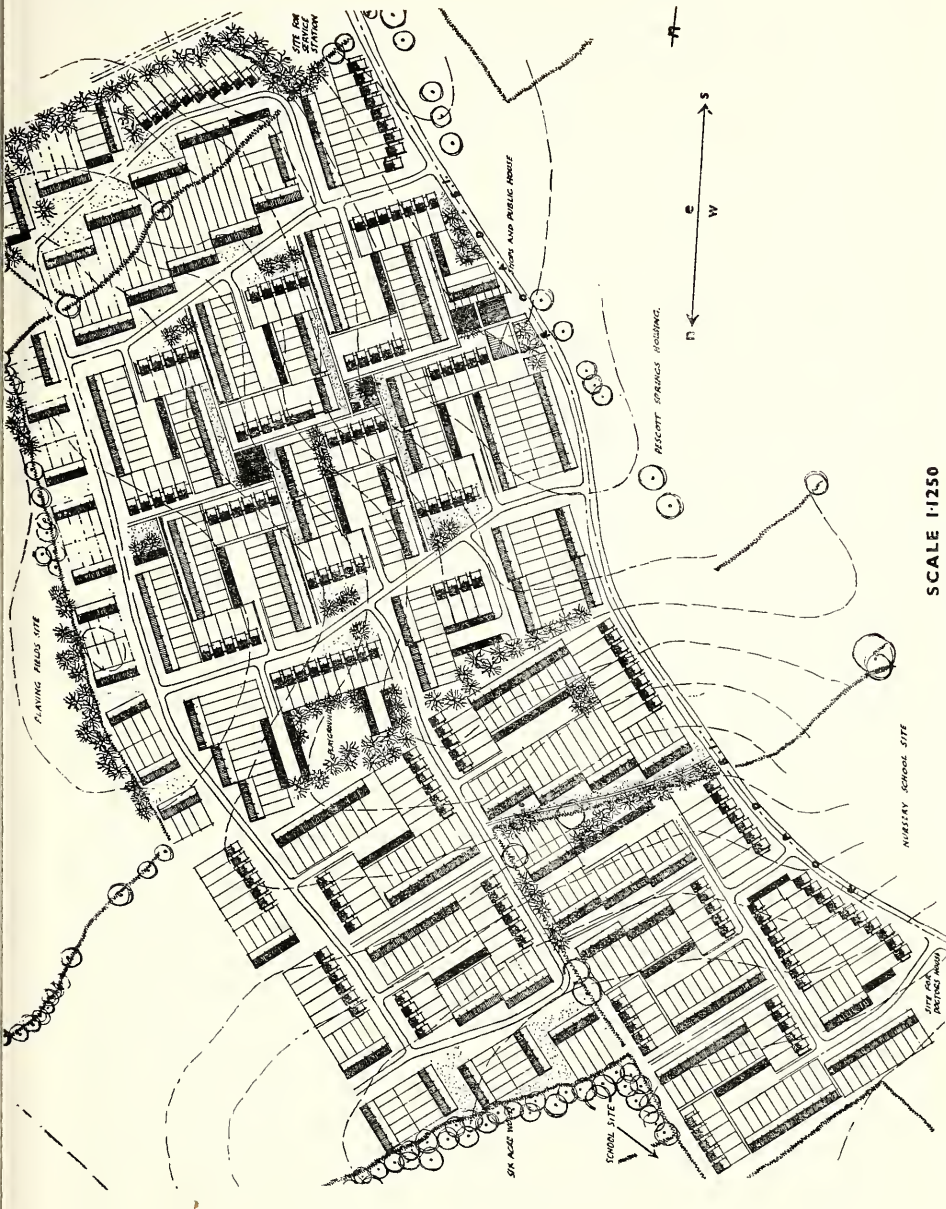


FIG. 8—Stevenage—Elm Green residential area in the Chelms neighbourhood. In this layout culs-de-sac run into the areas at the backs of houses many of which face on to pedestrian ways, a partial adaptation of the Radburn layout.

and much of the town centre had been completed, and about a half of Chells had been built.

Being designed to receive industry and population from London in conformity with the policy of dispersal, while the housing is for those working in the town, it was necessary to synchronize factory building as closely as possible with housing, and keep the former a little ahead of the latter. This was for the most part accomplished, except for one period when industry lagged a little behind, and it was necessary to allow one or two firms to come from other parts of the country to maintain the balance.

HOUSING AND RESIDENTIAL AREAS

The majority of houses provided at Stevenage have been of the two-storey type, although there is a conspicuous minority of other types. The two-storey unit has been built to many different designs so as to give variety, but they may be classified broadly as having mainly three or two bedrooms, and of three basic types, largely determined by orientation; that with north aspect in which the kitchen and bathroom are in the front and the living rooms and main bedrooms face south towards the garden; that with the south aspect in which living rooms and main bedrooms are in the front and the kitchen and bathroom at the back; and that in which the houses face east and west and are provided with a through living room with windows front and back. There are about 12 plan variations on these basic types and a considerable variation in elevational treatment where different materials are juxtaposed. Bricks of various hues are related to cement rendering of different colours and to panels of painted boards and sometimes of natural timber. Variety is also secured in the designs of the entrances.

One of the first parts to be built was Stoney Hall immediately south of old Stevenage and a little north east of the town centre. It represents an experiment in high density development and includes blocks of three and four storey flats, and one seven-storey block of 54 flats, making a total of 103 flats. The building of the tall block, especially at so early a stage, has since been recognised as a mistake. Probably the motive was to have a small proportion of flats near the town centre. Designed for middle-class tenants, they did not prove very acceptable to the workers who first came to the new town, whose natural reaction was that there are plenty of tall blocks of flats in London in the midst of all the recreations of life the metropolis provides. If they were merely to get the same thing at Stevenage they might as well stay in London. That also was the reaction of people going to East Kilbride and confronted with the prospect of living in flats there. In its report for 1952 the Stevenage Development Corporation admitted 'that this project has been undertaken too early in the general development plan in relation to the demand for accommodation by middle-class tenants, and that the flats are perhaps of too urban a character for a town such as Stevenage surrounded by open country', although it was anticipated

that they would be let as fast as they were completed. It actually took over three years for all the flats to be let. And it is interesting that, as late as 1961, some newcomers on the waiting list had to qualify for family houses by consenting temporarily to live in flats that the Corporation found it difficult to let.

In a booklet on building Stevenage published by the Development Corporation in 1954 it is stated that 'Almost every person coming to live in a new house at Stevenage, which is after all a country town, wants at least a small patch of garden to make the country seem yet a little closer. Discussion with representatives of the Stevenage Residents' Federation has shown that few wish to have a flat as a home and still fewer to live in a high building in spite of concentrated design and luxury amenities. They have expressed their desire to get away from communal staircases, balconies or landings, and to have a house with its own front door'.

Stoney Hall is perhaps the least satisfactory housing development in Stevenage; it does not escape a touch of the dreariness of much industrial and municipal housing. A far pleasanter area is that of Whomerley in Bedwell which was the first neighbourhood to be completed. Here the layout is of an irregular character consisting of curved roads with the spaces at the backs of the houses formed into common gardens like village greens, linked with each other by footpaths. The estate merges into the woodland area from which it derives its name, and many of the trees are retained among the houses. The whole effect of this residential area is very pleasant. In many of the new towns the residential areas are planned in a series of islands into which run culs-de-sac, but the planning of the Stevenage housing areas is too varied and irregular to be typified in this way. Some of it may be likened to tree branches from a main stem, and the value of this is that there is no through traffic. One of the simpler examples is the pattern of branches in Shephall south of Hydean Way. There is a centre stem with four branches one of which connects with a short road linked with the main one. Another arrangement is a series of culs-de-sac running off a curved road like Peartree Way, some of the culs-de-sac being secondary branches. The contours of the undulating site contribute to the character of the layouts. The houses are rarely sited parallel with the roadway, there is generally considerable variation in alignment, and the space between the roadway and the houses widens and narrows in a variety of shapes.

In Elm Green in the Chells neighbourhood a modified form of the Radburn layout has been followed. The principles of this layout are described more fully in the chapter on Basildon which was the first new town to adopt this form of layout. The idea is roughly that houses are arranged on three or four sides of a rectangle; three of these face on pedestrian ways, and a road runs into the centre of the area at the rear of the houses where garages are provided. The Elm Green estate is a long rectangular site between two roads linked by transverse roads, and from these roads the culs-de-sac run into the central areas at the backs

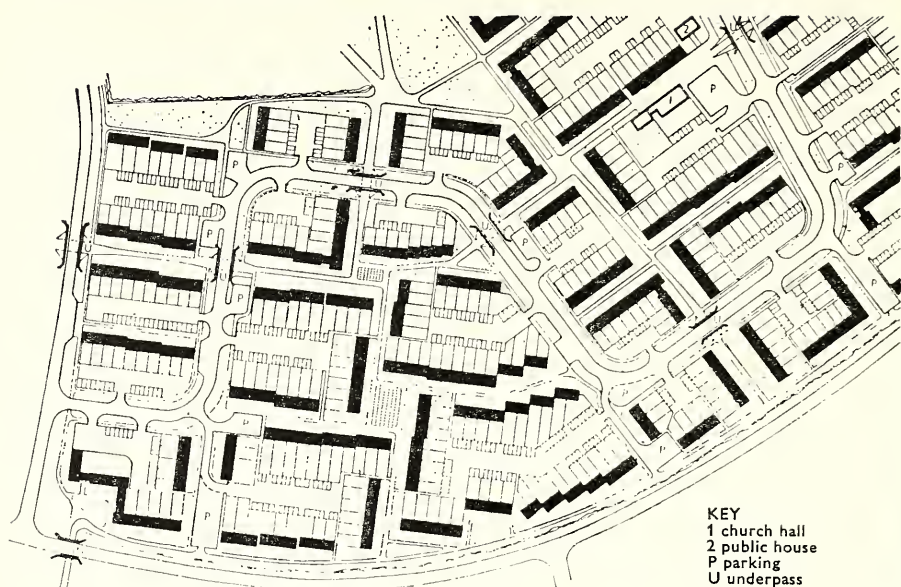


FIG. 9—Stevenage—part of the Pin Green residential area. A feature of this layout, like that at Elm Green, is the cul-de-sac with garages at the rear of houses which in many cases face on to pedestrian ways.

of the houses, the majority of which face on pedestrian ways between the fronts of houses. It can be appreciated that such a layout conduces to quiet, privacy and safety.

NEIGHBOURHOOD CENTRES

With neighbourhoods as large as about 10,000 one shopping centre would mean insufficient ease of access to the pantry shop for many residents, so at Stevenage in addition to the principal neighbourhood centres there are a few sub-centres. In Bedwell there is a large centre due east of the town centre and midway between two major town roads running east-west, while there is a small sub-centre to the south of the neighbourhood at Monkswood. At Broadwater, in the extreme south-east, the next neighbourhood to be completed, the principal neighbourhood centre is in the south at Marymead, the part farthest from the town centre, while others are east of the neighbourhood at Longmeadow, and west of it at Roebuck. This principle of placing the chief neighbourhood centre in the more remote area is also followed at Shephall, which is in the eastern part of the neighbourhood at Half Hyde, with two smaller groups of shops, of six at Hydean Way, to the west, and four at Bandle Hill, to the north.

These neighbourhood centres generally follow a pattern similar to that found at Crawley and other new towns, of keeping the shops on one side of the thoroughfare, often arranged on two sides of a triangle, or

three sides of a square, with a spacious area for pedestrians, and a church at one end and a public house at the other. That at Bedwell North has a row of four shops and a public house, 'The Gamekeeper', on the east side of the square, seven shops on the north side, with an extensive paved forecourt, several trees, and a telephone exchange further to the west beyond the road, while a church occupies a site south of the road. The shops have service areas and garages at the back, and flats over making three storey buildings, tall enough to give a pleasant scale and sense of enclosure. In the Marymead centre at Broadwater the shops are similarly arranged, with the public house, 'The Man in the Moon', in the same position as at the Bedwell centre, while a church occupies the west side of the area. The paved forecourt is not so extensive as at Bedwell, the traffic comes closer to the shops, and the general aspect is not quite so agreeable.

One of the largest neighbourhood centres is that at Half Hyde in Shephall, which has as many as 33 shops. On three sides of the central square, which is half for vehicles and half for pedestrians, there are rows of shops. This square faces east, and off to the south is a pedestrian way flanked by shops, and at the rear of the long line of shops on the west side is a service way which swings round on the north side, where there is another row of shops. Most of the shops have flats above in three-storey buildings and opposite the square on the further side of the road is a tall five-storey block. Height, which is complained of as being difficult to obtain in new town architecture, is here secured, and again a sense of enclosure is obtained. It is an ingeniously planned layout.

THE TOWN CENTRE

The town centre at Stevenage is internationally famous mainly because it is the first centre of a modern town with a completely pedestrian precinct. A foreign architect has remarked that if you have seen Coventry and Stevenage you have seen the best contribution to urban planning that England has made since the war. The precinctual area at Coventry is probably about the same size as that at Stevenage, but being only part of the centre of a much larger city it is obviously not so complete.

By the end of 1962 much of the centre was finished, including the middle portion with the shops. It is a rectangular area bounded by roads consisting of a long central pedestrian way, named Queensway, running north-south from which two other pedestrian ways branch eastward, and a small town square opens westward and connects with a bus station. All the ways are lined with shops, in two-storey and three-storey buildings, and a continuous canopy above the shops not only affords protection to pedestrians in bad weather, but is a unifying motif in the ensemble which permits individuality in shop fronts without destroying the general architectural harmony. In the centre of the town square there is a pool with an insignificant fountain and a very ugly clock tower rising from it. The square is not large and a desirable sense

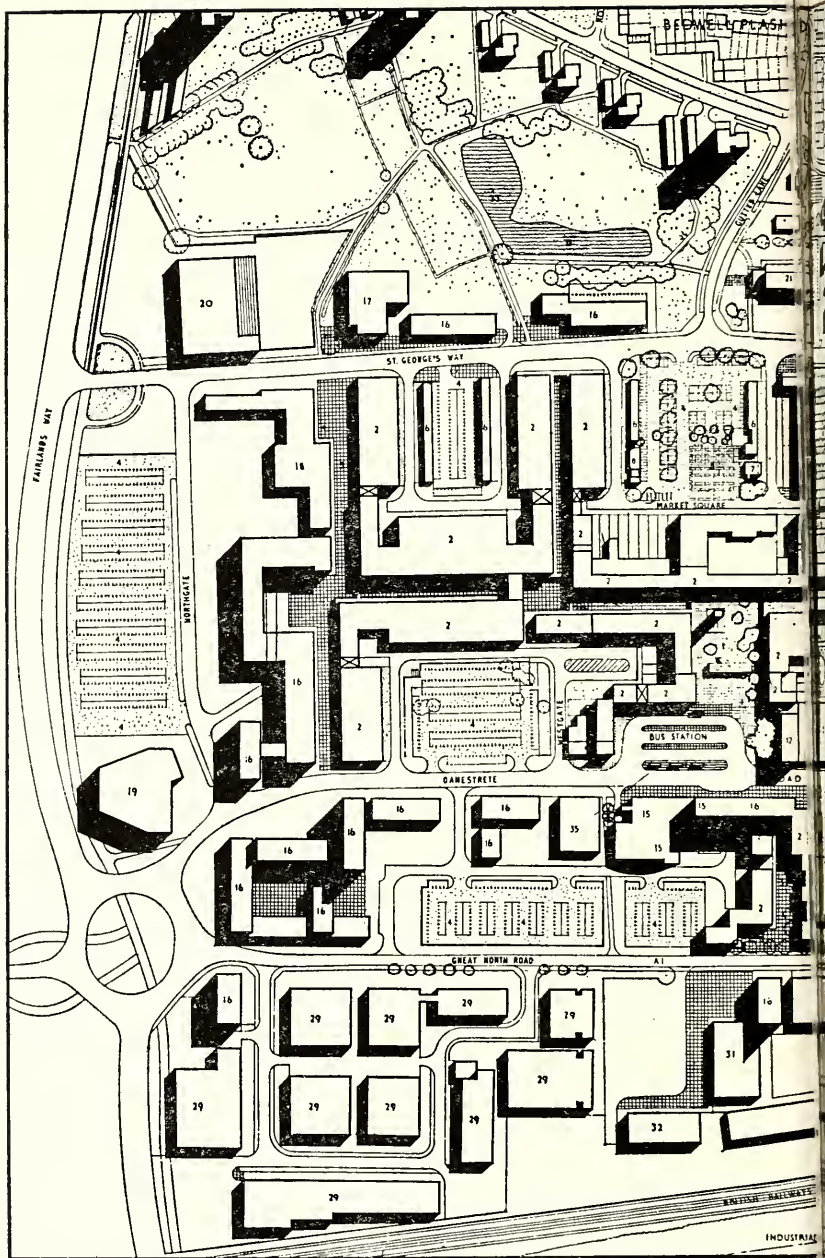
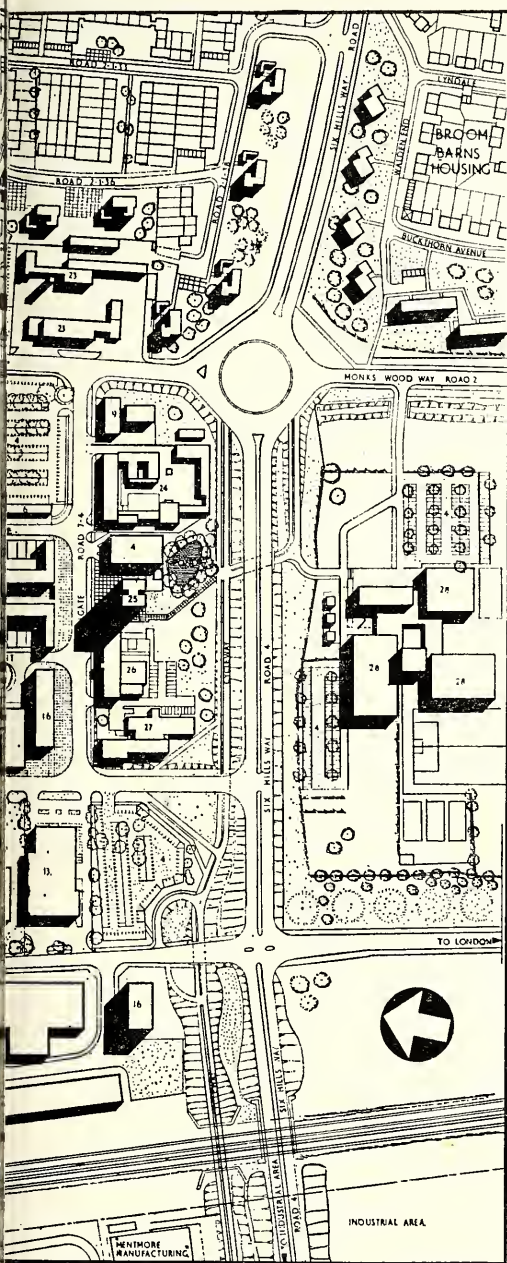


FIG. 10—Plan of Stevenage town centre, the first where the sho



LEGEND

- 1 Town Square
- 2 Stores and Shops
- 3 Pedestrian Ways
- 4 Car Parks
- 5 Market
- 6 Garage and Stores
- 7 Public Convenience
- 8 Landscape Depot
- 9 Public House
- 10 Boiler House
- 11 Clocktower and Pool
- 12 General Post Office
- 13 Garage and Car Showrooms
- 14 Bus Garage
- 15 Restaurant and Dance Hall
- 16 Offices
- 17 Youth Centre
- 18 Civic Buildings
- 19 Cinema
- 20 Swimming Pool
- 21 Church
- 22 Crown Offices
- 23 Fire Station
- 24 Police Station
- 25 Residential
- 26 Library and Health Clinic
- 27 Outpatients' Clinic
- 28 County College
- 29 Warehousing and Service Industry
- 30 Multi-level Car Park
- 31 Hotel
- 32 Railway Station
- 33 Town Park Lake
- 34 Friends' Meeting House
- 35 Bowling Alley

is a complete pedestrian precinct.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

of space is diminished by these features. It would have been far better if the clock tower at least had not been there. Nearby is a raised terrace, dividing the square from the bus station, and an interesting feature of this terrace is a bronze sculpture of a mother playing with her child, a vigorous and rhythmical work by Franta Belsky. Such are the differences of taste however there are many who like the clock tower and care little for the sculpture. Service roads coming behind the shops branch from the periphery road.

At the north end of the square, central with Queensway, is a site allocated for town hall, municipal buildings and offices. To the west, beyond Danestrete road are sites for further offices, a youth centre, dance hall and restaurant. On the east side beyond St. George's Way there is the very interesting Parish Church of St. George, completed in 1960 to the designs of Lord Mottistone, which has an interesting construction of concrete parabolic arches, and a tall campanile of original design. Also on the east side are sites for further offices, a cinema and swimming pool. To the south beyond Six Hills Way is a large site for a County College.

If there is one regret about so excellent a centre it is that the town square is not more spacious. It is good to have some sense of enclosure, but that should be combined with a sense of space. These two qualities are obtained in the centres at Crawley and Harlow, but not at Stevenage. Still it is good to see the idea of the pedestrian precinct so completely realised in face of much opposition. Here a woman can do her shopping accompanied by her children with a feeling of restful security.

THE INDUSTRIAL AREA

It can be said that the flow of industry to Stevenage has been generally satisfactory so that the building of factories has been a little ahead of houses, although there have been times when the Development Corporation could have wished that the flow was a little quicker. However, as in some of the other new towns, the balance of industry is constantly being adjusted with a view to future stability.

As before mentioned the industrial area is situated west of the town centre on the further side of the railway. The first factory built by the development corporation was that for the Bay Tree Press in Caxton Way, completed in 1952. Some firms for which factories were built, or who built their own in this new industrial estate, were already established in Stevenage, among them being George W. King, Ltd., and W. H. Sanders (Electronics) Ltd. A number of important firms representing a variety of industries have come to Stevenage, which include English Electric Co. Ltd., British Visqueen Ltd., D. Wickham & Co., Kodak Ltd., De Havilland Aircraft Co. Ltd., the Educational Supply Association, Platignum and Bowater Packaging Co. Ltd. Many factories have been built with a view to later expansion, in most cases extensions have already been made, and the area at present gives the impression of a spacious layout, while the undulating ground and the variety in

the design of factories, and their different heights, give an agreeable feeling of diversity. The diversity is apparent also in the kinds of industry, offering a fair variety of employment.

THE SOCIAL ASPECT

The majority of people coming to the new towns are young married couples, sometimes with small children who have acquired a house because the man's firm has moved to the industrial area. There is also a proportion of single persons who have moved with their jobs and who live in flats or lodgings. One of the chief tasks in the social building of a new town is to provide opportunities for the full life with increasing leisure to enjoy it. Many of the young couples are busy creating a home, and this itself is an absorbing occupation, while they can relax with television and other home pursuits.

It must be remembered that the majority have been uprooted from a congested environment in the inner suburbs of London where they have occupied a few rooms in an old house or tenement block. They are generally quick to realise that the change to a house all their own, with a garden spaciouly situated, with trees and the rolling country not far away, is an exhilarating change for the better. But in their old home they were in the midst of many friends and acquaintances, they were, in a sense, members of a clan from which they have been taken, and with all the advantages of the change they often at first have a feeling of isolation and of loneliness. They gradually make friends with their neighbours, but they lack many of the amusements to which they have become accustomed, and that is why it is important that there should not be too much lagging behind with the provision of these.

From available evidence provided by competent observers it is fair to conclude that the inhabitants of the new towns have settled down remarkably well. It is in part due to the prosperity that the country has enjoyed during the period of building. The people have had well-paid regular jobs in the factories and this has conduced to producing a feeling of contentment. It has enabled them to furnish their homes well, to acquire television, cars, and domestic gadgets, so that many who came as habitual grouzers were transformed into contented citizens in a few years. Another expression of this change is an increased interest in family life, and parents seem particularly anxious that their children should be well educated. One headmaster at Stevenage has commented that children stay at school longer than in most industrial towns, and that the number who remain beyond 15 is four times the national average.

The homes, jobs and schools have contributed to what may be regarded as a fairly satisfactory social state, but what of recreation and cultural interests outside the home?—for sometimes a man and his wife want to get out and mix with other people in the town, a desire present with single persons from the start.

There are numerous clubs and societies as in all the new towns representing a wide variety of interests, some of which are organised by the

various churches, and some by interested groups of individuals. There are dramatic societies, art clubs, horticultural and gardening societies, political groups, sports clubs for almost every sport, numerous women's and youth organisations, in fact several such organisations in each neighbourhood for those wishing to join. There is, however, a deficiency of premises for such activities; there are, it is true, community centre buildings at Broadwater and Bedwell, and temporary accommodation at Longmeadow, but the lack of adequate premises for all areas is something that needs to be overcome as soon as practicable.

There are many, however, who do not wish to find their recreation always with clubs and societies, and look rather to the chat in the pub or coffee bar, or for dance halls, concerts, cinemas or theatres such as are easily found in London. These are gradually being provided. In the town centre the 'Locarno' dance hall for 2,200 was completed in 1961, and an American-style bowling hall in 1962. County buildings occupy the south of the town centre of which the Library, Health Centre, Police Station and Hospital Out-patient Clinic have been completed. There are two cinemas in the old town, and a site for one in the town centre, while there is a pub and cafe in each neighbourhood, and coffee bars in the centre. A good multi-purpose hall which could be used as a theatre, concert hall and for large meetings, is needed, and it is good to note that the plans for both the Town Hall and the College of Further Education include such halls.

In 1959 the Board of Administration of the Calouste Gulbenkian Foundation asked a committee to report on the needs of the disproportionately high number of young people in Stevenage and other new towns. The committee investigated conditions in Stevenage, and made certain recommendations in a report published in the autumn of 1959. It noted that the population contained a very high proportion of married persons below the age of 40, and of young children. There were fewer teenagers; the number between 15 and 21 was 60 per thousand compared with a national average of 83 per thousand. In ten years it is estimated that the position will have changed so much that instead of 60 it will be 130 per thousand in that age group. It will mean, therefore, a considerable bulge of young people in their late teens, and is a situation that will obviously occur in all the new towns. The report is therefore concerned with adequate provision for this high proportion of youth not only for its own benefit, but so that it is not engaged in anti-social activities. The report quotes a witness as saying that 'we have no gangs now, but I greatly fear we may have them' and the committee adds that its investigations have shown this fear to be widely entertained.

The greatest antidote to any such tendency is probably education, and it is satisfactory to note, as previously indicated, that the people of Stevenage are more education-minded than is usual in industrial towns; and there is every reason to believe that this attitude, with the good Hertfordshire schools, will continue. But the Gulbenkian committee emphasises the importance of good youth clubs and youth centres, and

recommended the appointment by the county authority of a full-time youth officer, and later the building of an adequately equipped youth centre in the town centre, which might cost £30,000 with an annual cost of £4,000. It points out that there is no need to rush into building it, but that the youth service 'should move towards the financing and planning of the centre and make up its mind exactly what it is intended to do and how it will fit into the other amenities which are due to be built in and around the town centre'. This is wise advice, because it is only by experience that needs can be formulated. In the plan of the town centre a site of good size is provided for a youth centre. If the three responsible bodies go forward somewhat on the lines of the recommendations of the Gulbenkian committee it will be an experiment that will certainly be watched with interest by many of the other new towns, although, as will be seen in subsequent chapters, many of the other new towns are fully alive to the needs of youth and several admirable youth centres have been provided.

Chapter XIII

CRAWLEY

THE New Town of Crawley was designated on 9th January 1947. The designated area of 6,047 acres is situated at the conjunction of Surrey, West Sussex and East Sussex, about 30 miles south of the centre of London and about 22 miles north of Brighton. It includes the small town of Crawley and the villages of Three Bridges and Ifield, and had originally a population of about 9,500.¹ The main London to Brighton line runs through the eastern part with a junction at Three Bridges from which a line goes west to Horsham and the West Sussex coast, with stations at Crawley and Ifield; and eastward to East Grinstead and Tunbridge Wells. The main London to Brighton Road runs through the area, with a by-pass west of the old town of Crawley. The site is generally flat to the north, but gently undulating to the south, with a general slope from south to north. It varies between open and wooded country, and is bordered to the south-east by the beautiful forests of Worth and Tilgate. The land is of moderate agricultural quality with top soil varying between stiff weald clay and Upper Tunbridge Wells sand.

OUTLINE PLAN

Dr. Thomas Sharp had been appointed to make a survey and prepare an outline plan for Crawley in August 1946, but resigned in the following summer, and Mr. Anthony Minoprio was appointed to continue the work. The plan was approved by the Ministry of Town and Country Planning in February 1950. This main outline has formed the basis of development, but details have been changed and modified as development proceeded.

The town was originally planned for a population of 50,000, with some provision for extension. Of the 6,047 acres the plan covers 4,000 acres. The remainder of the designated area is farmland, mainly to the south-east, south and north, part of which is reserved for future housing and industry to allow an increase to 56,000 and beyond, probably to 70,000 by 1981 which would result partly from natural growth. Nine neighbourhoods were provided, grouped round the town centre which adjoins the main street of old Crawley. The centre is thus well situated geographically in relation to the rest of the town, no part being more than $1\frac{1}{2}$ miles away with the exception of a small area at the eastern

¹In the First Annual Report of the Crawley Development Corporation 1948 the population was given as 8,000, but it is now accepted that this was too low.

CRAWLEY

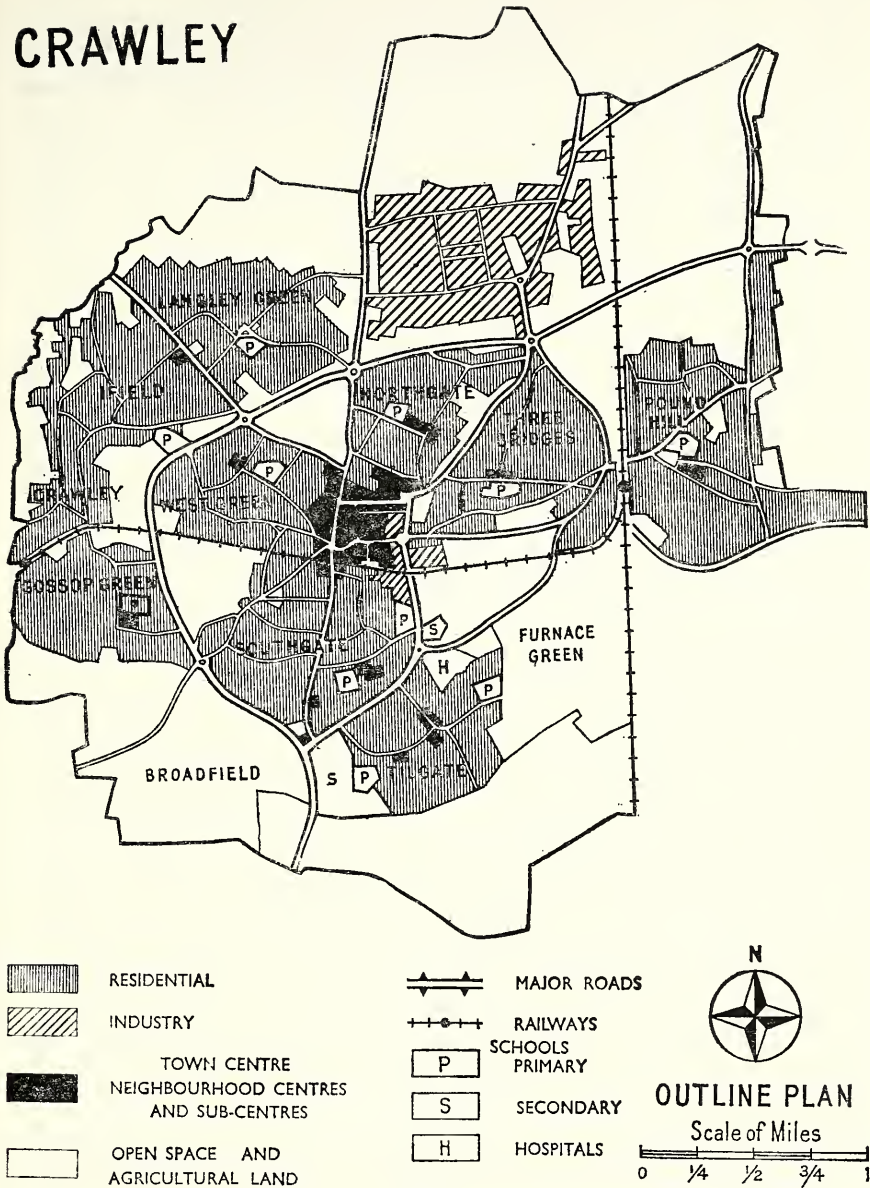


FIG. 11

extremity. The industrial zone is to the north of the town; thus goods transport between it and London will not have to pass through the town; while the area allocated mainly to heavy industry adjoins the railway, which is not likely, however, to be used. Three parks are situated about $\frac{1}{2}$ mile from the centre in different directions, while sports grounds and playing fields are conveniently placed in the various districts.

Nine neighbourhoods for a population of 50,000 means that one

primary school and one shopping centre is provided for each neighbourhood, a much simpler and more satisfactory arrangement than at Stevenage. Referring to the decision to make comparatively small neighbourhoods when the recommended size was about 10,000, the Crawley Development Corporation stated in its 1957 report 'that these smaller neighbourhoods could more readily build up a community life, could be more closely integrated, would ensure that children could travel to the primary schools more readily, and that people could more easily reach the shops, public houses, churches and the other buildings in the neighbourhood centres.'

Each primary school, apart from three denominational schools, is as near as possible to the centre of the neighbourhood, so no child will have to walk more than $\frac{1}{2}$ mile to school. They are all placed between the principal town roads which radiate from the centre, while there is a ring road between the inner and outer neighbourhoods, the by-pass being utilised for the western part. On this ring road secondary schools are grouped and include a grammar school and several secondary modern schools, and a large college for further education with 2,000 students is in the centre. The actual neighbourhoods are: four inner within the ring road: West Green (pop. 5,000 including town centre), Northgate (5,100), Three Bridges (6,100) and Southgate (4,400), their names indicating their positions; and the five outer are Ifield (5,900) and Langley Green (8,300) to the north-west, Pound Hill (5,300) to the east, Tilgate (8,000) to the south and Gossops Green (4,600) to the south-west.¹ The inner neighbourhoods all had substantial existing populations, while outer neighbourhoods had very small populations, which made their planning a simpler matter.

There are perhaps two disadvantages in this otherwise excellent plan: one is that the main London-Brighton road runs through the town so that the three western neighbourhoods, Langley Green, Ifield and Gossops Green are somewhat divided off from the rest of the town; and the other is that the railway with its high embankment cuts off Pound Hill on the east. It is proposed, however, to build a new Brighton road east of the town, and when this is done it will perhaps reduce fast traffic through the town.

In 1961 West Sussex County prepared a development plan for Crawley for the period 1961 to 1981, the first development plan to be prepared for a new town. In this plan it is proposed to provide for an increase in the population of 54,000 at the beginning of 1961 to 70,000 by 1981. Nearly all of this addition, some 15,000, is made up by natural increase, and only 1,000 by inward migration. The migration into the town in the first five years of the plan is anticipated as more than 1,000, but in the remaining 15 years it is intended that most of the Development Corporation houses which become available for re-letting shall be

¹The populations are taken from Sir Thomas Bennett's report in 1960. The populations given in the original plan of 1950 were Westgreen 5,200, Northgate 4,300, Three Bridges 4,500, Southgate 4,400, Ifield 6,600, Langley Green 5,400, Pound Hill 5,300, Tilgate 4,700 and Gossops Green 4,600.



(a) Queens Square, the large central paved space of the town. The bandstand in the centre was taken from old Gatwick racecourse.

Plate 13. Crawley.

(b) Broadwalk a pedestrian shopping way which connects Old Crawley High Street with Queens Square.





(a) Pound Hill neighbourhood centre. Shops form two sides of a triangular green in which old trees are preserved.



(b) Ifield neighbourhood centre with its long canopied row of thirteen shops.

(c) Three Bridges neighbourhood centre with a row of shops in the distance (and public house beyond) and St. Richard's Church designed by Cachmaile-Day in foreground.

Plate 14. Crawley.





(a) A row of six terrace houses in a pleasing setting of lawns and handsome old trees.

(b) An intimate pedestrian way in Southgate.



(c) Housing in West Green, with greens used as play spaces for children.

Plate 15. Crawley.





Plate 16. Crawley. (a) Detached houses with garages built for sale in Three Bridges neighbourhood.



(b) Tilgate neighbourhood centre with curved terrace of twenty shops. Upper maisonettes project over the shops and form a protective canopy.

(c) Semi-detached three bedroom houses facing small green at Three Bridges neighbourhood.





(a) Dower Walk, Gossops Green. Houses on either side face a fine avenue of existing trees.

(b) The Apple Tree Public House in West Green.

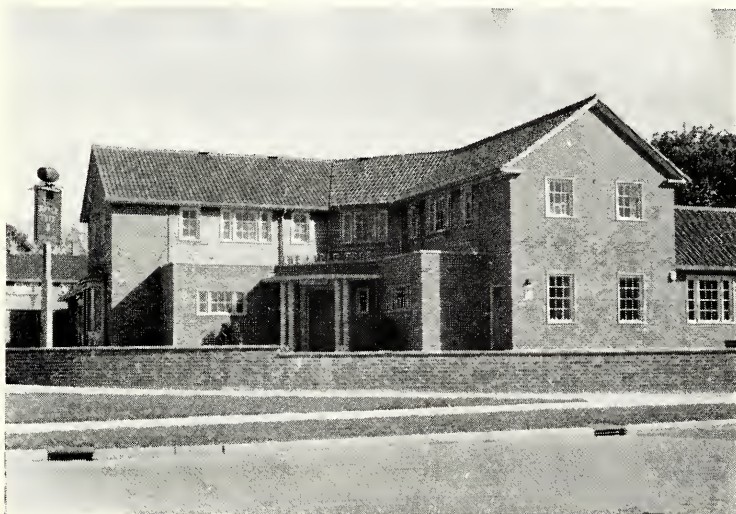
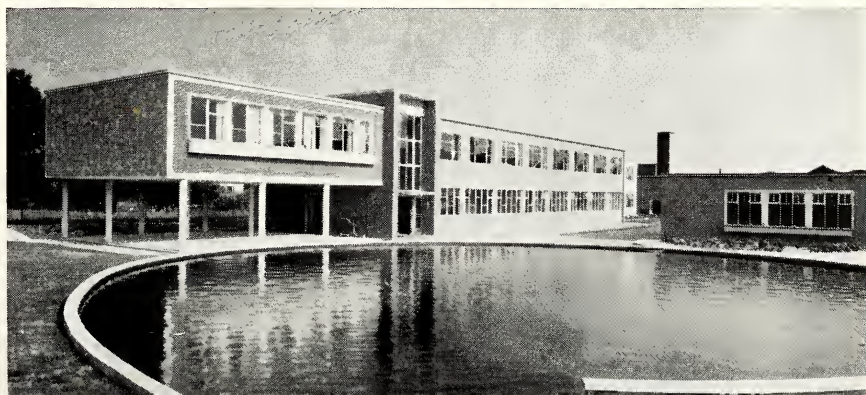


Plate 17.
Crawley.

(c) Office and research building for the Metals Division of the Telegraph Construction and Maintenance Co. Ltd. The pond in the foreground serves to cool water for factory processes.





(a) Manor Royal—the main thoroughfare of industrial area.



(b) Standard factories built by the Development Corporation for letting in units of 7,000 sq. ft.

(c) Factory of A.P.V. Ltd.: a building in which colour is used effectively. The ribs of the concrete frame are white in marked contrast to the red and yellow infilling brick. Architects: Adie, Button and Partners.

Plate 18. Crawley.



occupied by people already in Crawley. The additional houses will thus be mainly for the younger people who at present live in Crawley and who marry and start new households. As the average age increases there will also be the vacation of a number of houses.

To accommodate the proposed increase two more neighbourhoods are planned: Furnace Green in the south-east, and Broadfield in the south-west; the western part of Southgate will be completed, and additions will be made in the surrounding areas of Gossops Green, mainly

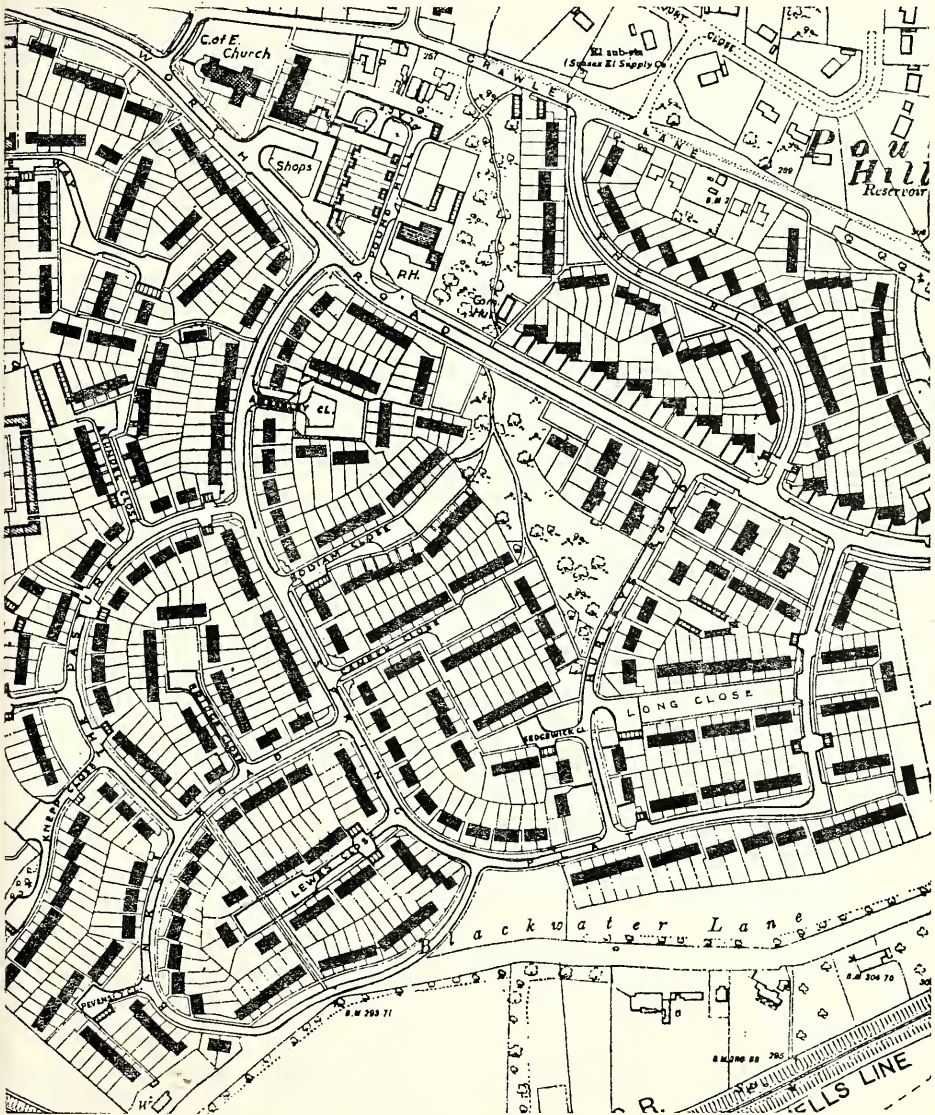


FIG. 12—Crawley—part of the Pound Hill neighbourhood completed in 1955. The centre with church and public house can be seen at the top of the plan. Much of the housing layout consists of closes and culs-de-sac.

north and south, the western part of Ifield and a part of Pound Hill to the north-east. All these extensions come within the originally designated area.

BUILDING THE TOWN

As with Stevenage, progress was slow in the early years of building. Delay was caused at the start because of opposition which resulted in action being taken in the High Court against the designation order. Unlike the Stevenage case, the action, heard in July 1947, was not successful, nor was the appeal, heard in the following December. The national economic difficulties of that year were also a brake on progress, so that it was not until early in 1950 that the first houses were started. Nearly 1,500 had been built by the end of 1952, and the rate of building from that year until 1957 was between 1,000 and 2,500 houses a year, in 1957 about 2,484 having been built. In 1958, however, there was a considerable drop to 465. Output kept at about this level in 1959 (692) and 1960 (540), but dropped in 1961 to 252 and in 1962 to 227. The reason for the decline after 1957 was that the town was nearing its originally planned maximum, and decisions had not then been reached regarding a larger population. By the end of 1962 about 13,596 houses had been completed of which the Development Corporation had built 10,968.

Factory building has been ahead of this, and employment in factories, shops and at Gatwick has absorbed all newcomers. Indeed in January 1961 the Crawley Industrial Group pointed out to the Minister of Housing and Local Government that the provision of houses was not keeping pace with the industrial development, and the group stated that there were about six hundred notified vacancies which could not be filled because houses were not available. The Minister agreed to an extension of the housing programme so that houses could be completed at the rate of five to six hundred in 1961-62, about eight hundred in 1962-63 and some four hundred a year for the following three years, which would mean an additional population of 8,000, and would bring the total to about 60,000 by 1966. If such a demand from the industry of Crawley were to occur again the question would arise whether Crawley could accommodate it and yet adhere to the principles by which it is planned. This increase had not materialised by 1962.

The neighbourhood shopping centres have kept pace fairly well with housing, having been completed for the most part a little before completion of the residential areas. A large part of the shops section of the town centre was completed by the end of 1957.

The first neighbourhoods built were the three inner residential districts of West Green, Northgate and Three Bridges, all nearly completed by the end of 1954. Meanwhile progress had been made with Langley Green to the north-west, and Pound Hill to the east, both of which were mainly completed at the end of 1955, while Ifield was completed about a year later. Southgate was about half completed at the end of 1957, the

building of the westerly part being deferred to a later period. Tilgate was completed at the end of 1958, while much of Gossops Green was built by early 1961. Thus a new town of about 55,000 has been built in little more than ten years. It is no mean achievement.

Water supply for the new town has been derived from a new source. None of the existing supplies when the town was designated were capable of being developed, and a scheme was put into operation by the Weir Wood Water Board on behalf of the development corporation

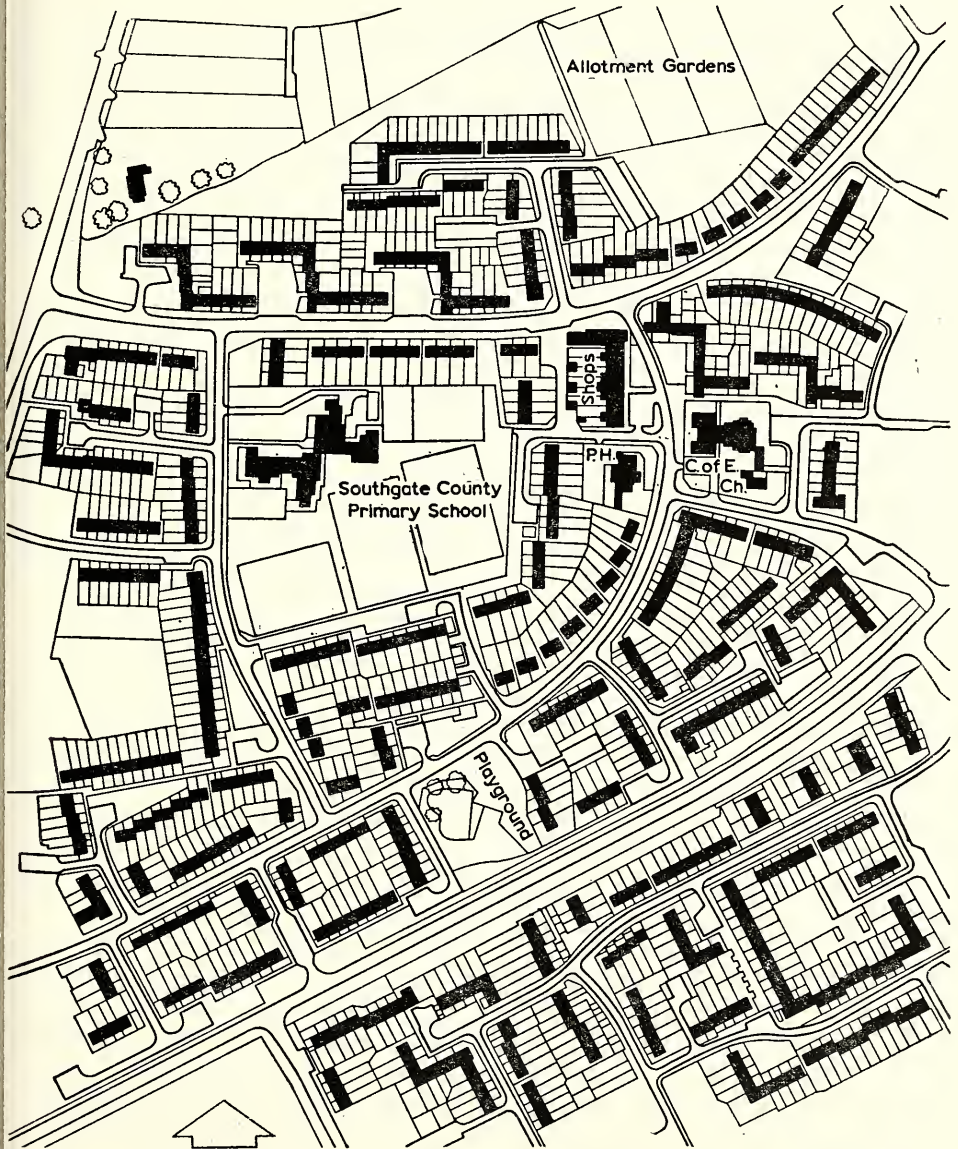


FIG. 13—Crawley—part of Southgate neighbourhood completed in 1957. To the east of the primary school is the centre with shops, church and public house.

whereby a reservoir was built on the river Medway near Forest Row. An impounding dam 1,680 feet long and 40 feet high was constructed and 300 acres of land were flooded. This supplies Crawley with about 2 million gallons a day, and also supplies 116 square miles in East Sussex. While this reservoir was under construction a temporarily augmented supply was obtained from Ardingly. As the ultimate needs of Crawley may be in the region of $4\frac{1}{2}$ million gallons a day, additional supplies will be obtained from the River Rother at Hardham.

THE RESIDENTIAL AREAS AND HOUSING

How has the plan, in its widest sense, worked out? It is best to consider first the housing and the residential areas; then the town centre; then, after glancing at the industrial area, to ask whether a good setting has been provided for a full and happy life. A new town cannot be more than a good stage set which can contribute much to the success of the play; although some would go further and say that with bad theatre design and acoustics the play is ruined, in which there is perhaps a good deal of truth.

As a general policy, the development corporation has concentrated on providing family houses with gardens, because they have found that this is in accordance with the wishes of the majority. In the early stages a proportion of three-storey flats was provided, and of the first 622 dwellings to be built in the first neighbourhood of West Green, 96 were such flats, and 50 were two-storey flats; in Northgate, of the first 758 dwellings 66 were three-storey flats and 36 two-storey flats. In the neighbourhoods built later a smaller proportion of flats has been provided. The corporation stated in its report for 1952: 'Flats have been erected in a decreasing proportion as it is abundantly clear that once tenants decide to come into the country to live they almost universally prefer a house with a garden.' The corporation also stated that it had 'closely examined the cost of constructing high flats' and that 'in every case . . . they cost substantially more per square foot of created space than do houses, and they cost a great deal more to administer. The corporation has not, therefore, considered that in the circumstances of a country town high flats can be justified, either socially or economically.' The corporation also remarked in its 1957 report that 'By careful research, the corporation learnt that not more than $2\frac{1}{2}$ per cent of tenants wanted to live in flats, and that there was a universal desire for a garden, and this therefore dictated the general pattern of housing.'

The corporation originally based its programme on 64 per cent three-bedroom houses, 25 per cent two-bedroom, 5 per cent each one-bedroom and four-bedroom, and 1 per cent five-bedroom (see 1952 report). A year later (1953 report) this was amended to 75 per cent of three-bedroom houses, and a reduction of the two-bedroom type to 15 per cent, as the corporation found this more in accordance with demand. Some of the one-bedroom and two-bedroom houses are bungalows for old people. A few larger houses with garages, detached and

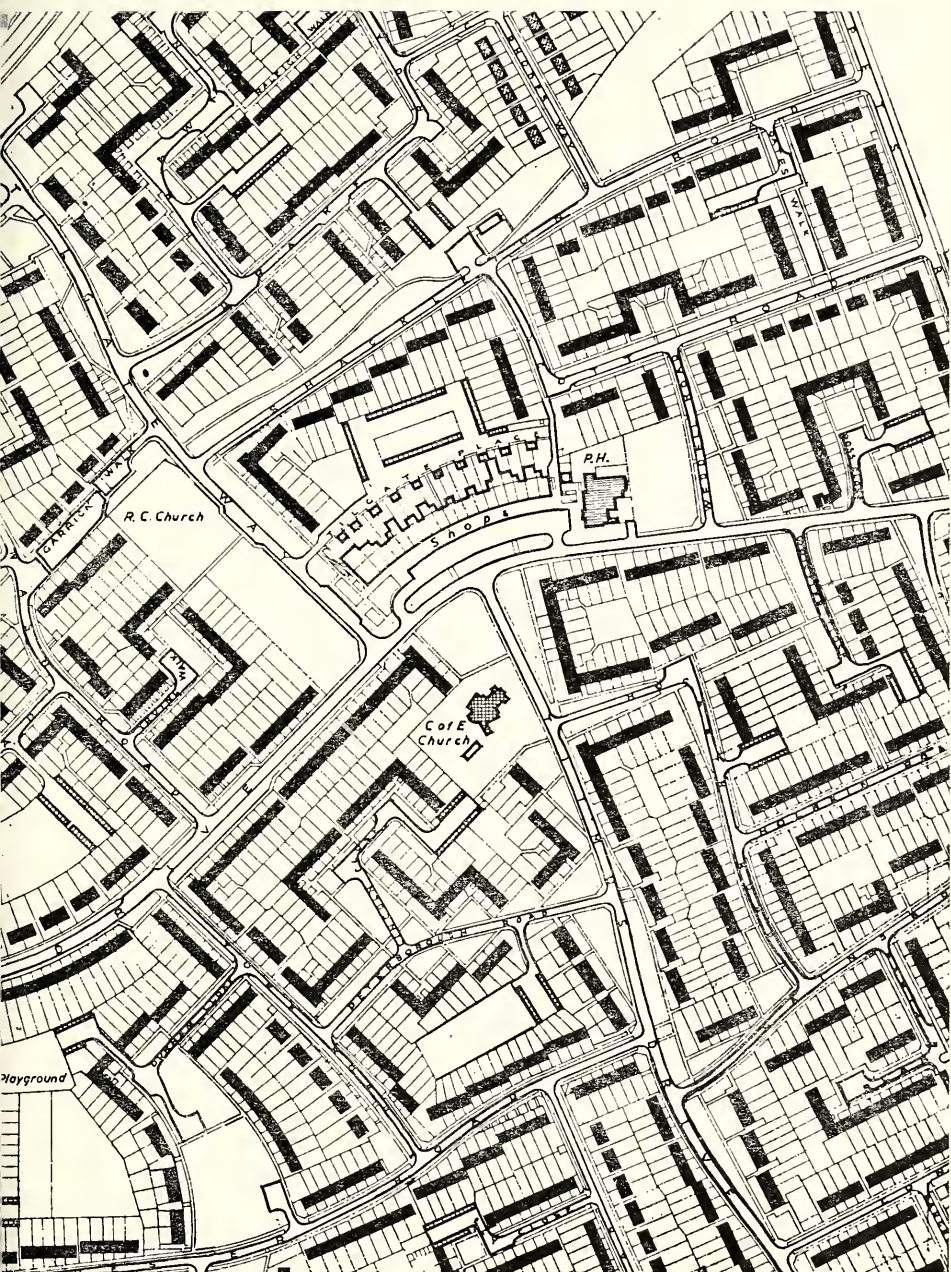


FIG. 14—Crawley—part of Tilgate neighbourhood completed in 1958. At the east end of the long curved row of shops forming the centre, is a public house, while the church is a little to the south. Note the variety in the cul-de-sac planning.

semidetached, have been built in the neighbourhoods for letting and for sale, while land has been made available for private development of houses for sale. Generally the family houses have been built at densities between 10 and 16 to the acre. A wide variety of types of houses, as many as 249, have been provided, some of them ingeniously planned, compactness and a full utilization of available space being noteworthy features. One plan incorporates a covered passage between houses which serves as store and utility space, but also as a valuable sound barrier.

LAYOUT OF HOUSES

One of the most striking features of the residential area of Crawley, as of most of the new towns, is the grouping and layout of the houses. Unity and variety, quietness and safety from traffic have been the guiding principles. There has been in Crawley a general avoidance of the long straight street, and the long unbroken terraces of houses which spell dreariness and monotony. Instead the roads curve and wind, while other roads are culs-de-sac round which houses are grouped; or the roads change to lawns or pedestrian ways, which often pass under arches formed by the houses. Sometimes houses form three sides of a square set back from the road.

A favourite method of planning has been the familiar one of arranging houses round a plot of irregular shape, with the houses facing outwards, and gardens inwards, with a cul-de-sac or close running into the centre. This cul-de-sac often terminates in a square or irregular rectangular plot of grass round which the houses are grouped, and the effect is exceedingly pleasant, especially as existing trees are often preserved or new trees planted. Several good examples of this kind of planning can be seen in the southern area of Pound Hill, where each cul-de-sac is given the name of a close derived from a Sussex castle such as Amberley, Bodiam, Camber, Eridge, Lewes and Sedgewick Closes. Some of the other neighbourhoods also offer good varied examples of this kind, such as Butts, Lodge, Kites and Deerwood Closes in West Green, and Lancing and Treyford Closes and Patching Place, in Ifield. The three last-mentioned culs-de-sac terminate in generous areas forming quiet attractive precincts. Other arrangements are the grouping of houses round greens of various shapes—squares, triangles, segments—set back from the roadway. Where houses line the curved roads, bends are such that there is a pleasing sense of partial enclosure with glimpses beyond at intervals, effects that are also present in the culs-de-sac. An example of the former is in Forester Road, Southgate, where the road bends a little before the neighbourhood centre is reached, and the space is enclosed by the church and centre at one end and by the bend at the other, yet there are glimpses here and there on either side through pedestrian ways to places beyond. Another grouping in Southgate which is noteworthy has houses facing on the playground of the primary school with just a strip of green and pedestrian way between, and a road at intervals stopping at the school fence.

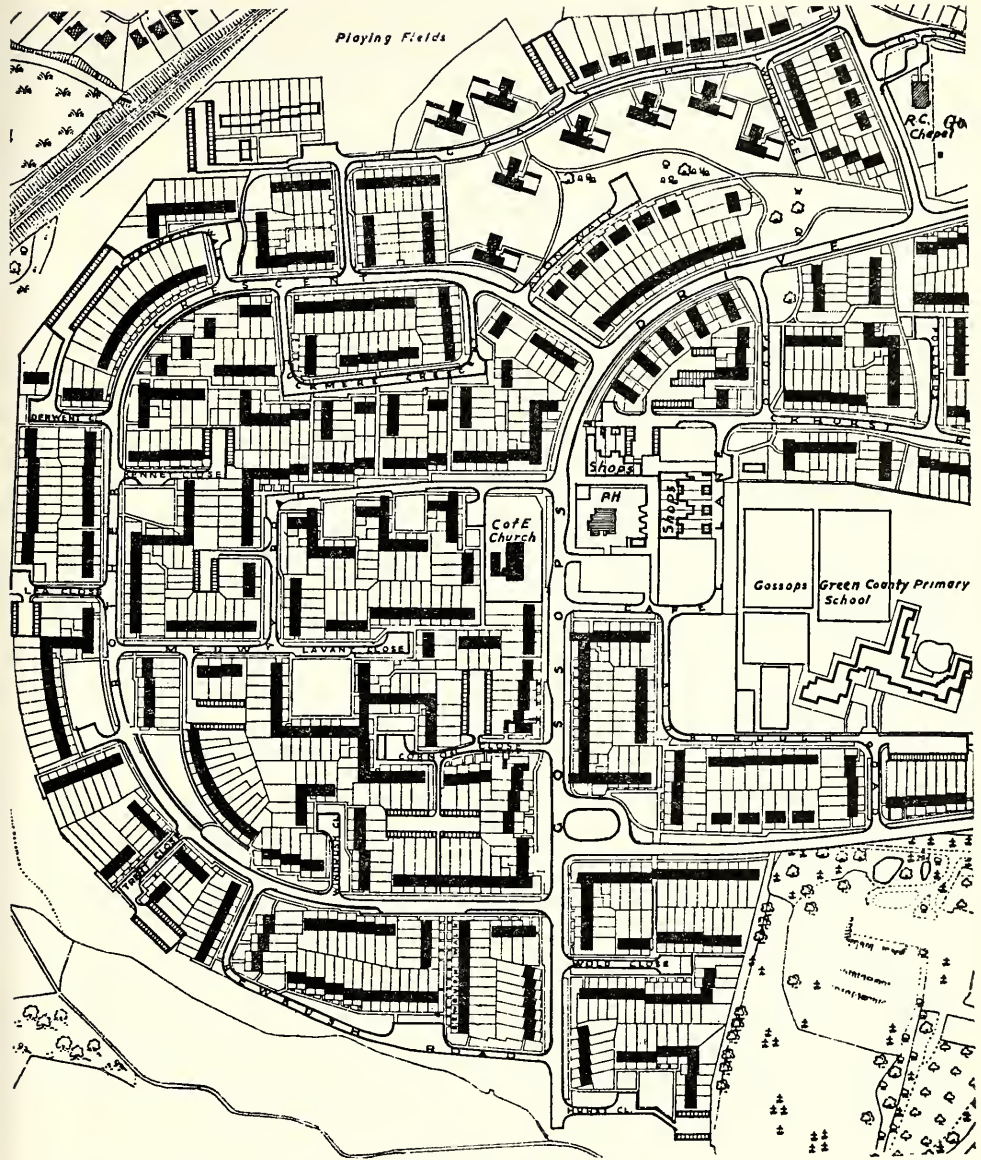


FIG. 15—Crawley—part of Gossops Green neighbourhood completed in 1961. The shops of the centre form two sides of a square with a public house in the middle. A church is nearby, on the west side, and the centre adjoins the primary school. In part of the housing layout a cul-de-sac ends in a small square at the rear of the houses where garages are provided.

Although houses are sited along curved roads and around squares and various shaped greens, much thought is given to orientation. Many of the roads in Northgate and Three Bridges run roughly north-south so that the houses are of approximately east-west orientation. Where the rows of houses run east-west the plans of the houses are arranged accordingly. Thus in the roads running east-west in the Southgate neighbourhood houses on the south side have the kitchen facing the road

with the living room and bedrooms facing the south, while the houses on the north side have the living room facing the road, with the kitchen towards the garden. One of the pleasantest neighbourhoods is Gossops Green situated on a hill which was formerly well wooded. It has been possible to retain a proportion of trees which can be seen in some profusion in Dower Walk that runs north-south on the summit of the hill and which once formed the avenue to Woldhurstlea house.

NEIGHBOURHOOD CENTRES

In most towns of England we are accustomed to local shops being grouped on either side of a main road. During busy shopping times cars and vans are usually parked on either side of the road, making it dangerous to cross. In most of the new towns, such an arrangement is avoided in the neighbourhood centres, and the shops are grouped only on one side of the road.

A common pattern seen in the Crawley centres is a row of shops, or shops on two sides of a square, with a public house at one end and a church at the other, and the primary school either opposite or nearby. The Three Bridges centre is a simple example:—a row of fifteen shops, with St. Richard's Church at the west end and a public house, 'The Maid of Sussex', at the east end, forming one side of a triangle so that in front of the shops is a triangular green. The primary school is opposite.

The centres of Langley Green with its nineteen shops and Pound Hill with its ten shops, each form two sides of a square with a public house and church at either end. The church at Langley Green is St. Leonard's (C. of E.), the public house the 'Dr. Johnson'. At Pound Hill the church is St. Barnabas' (C. of E.) and the public house the 'White Knight'. The space in front of the shops at Pound Hill is a triangular green in which some of the existing trees have been preserved to contribute to the pleasant effect. Langley Green is a little more formal, with large rectangles of grass and rows of planted trees, although some existing trees are preserved. In West Green and Northgate the shops are in a row, the former with only seven as it is the nearest to the town centre and old Crawley, and the latter with thirteen. Both have public houses on the opposite side of the road, 'The Apple Tree' at the former and 'The Black Dog' at the latter. Northgate has a Methodist church at the other end, and a primary school not far away. Opposite the shops at West Green and a little way up the hill of West Green Drive is a community centre which forms one end of the primary school. Ifield is another straight row of thirteen shops, again with a public house, the 'Pelham Buckle' at one end, while Tilgate is a fine curved terrace of twenty shops. Southgate has ten shops, eight in a straight row with two round the corner, with a public house 'The Downsman' at one end and, opposite, St. Mary's Church, the largest new church in Crawley, combined with a hall making an original and handsome building. Gossops Green, the last to be completed, has shops on two sides of a square with

a public house, 'The Windmill', in the centre of the square, the space between being pedestrian ways.

All these centres have something of the quiet character of precincts, situated only on a local road, giving a sense of security foreign to arrangements with shops on either side of a main road.

THE TOWN CENTRE

A little to the east of Old Crawley High Street, and a little to the north-east of Crawley Railway Station is the new Town Centre, bound on the north by a Boulevard and on the south by Three Bridges Road and the railway. Queens Square is the central paved space. A

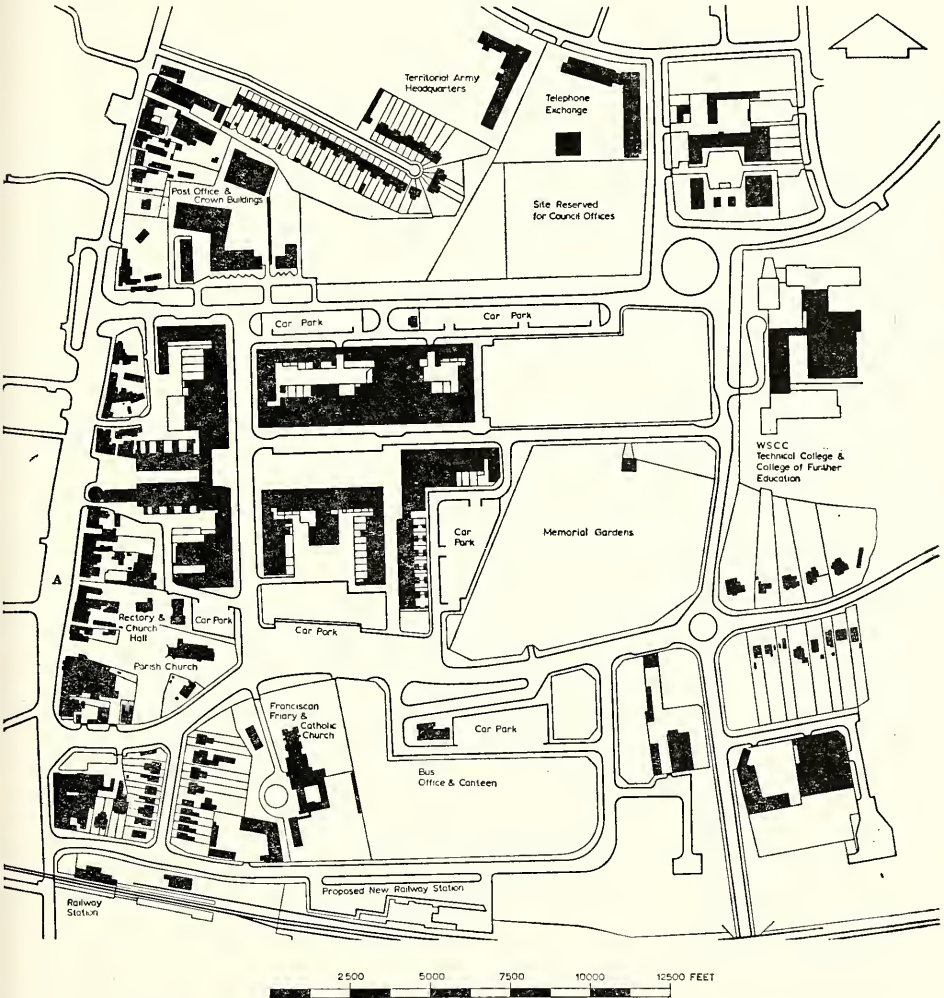


FIG. 16—Crawley Town Centre. The road on the left running north-south (A) is the High Street of old Crawley. There is a prospect that the road running through the centre (B—Queens Square) east-west may be closed to vehicular traffic.

decorated fountain designed by J. Bainbridge Copnall, forms a prominent feature; there is a sprinkling of trees, seating, and a bandstand. Running off the square is a pedestrian way between shops called Broad Walk, connecting with Old Crawley High Street, and another—The Martlets—connecting with Three Bridges Road. Roads intersect the centre forming a T, which makes it possible for through traffic to use these roads. Here an opportunity was missed of creating a complete pedestrian precinct like that of Stevenage. Queensway could have been stopped at the pavement to the east of the main block of shops and Broadway could have been two culs-de-sac stopping at the building lines north and south of Queens Square (see Plan). The failure to make this a pedestrian precinct seems to us a blemish on the otherwise excellent centre. Some thought, however, is being given to closing Queen's Square to traffic and making it exclusively a pedestrian area.¹ The architecture, if not very distinctive, has a general effect of unity, with a pleasingly calculated relation of horizontals and verticals, with but slight variations in building heights, while the façades have a bright effect with varied colour and texture.

To the north of the Boulevard, which has a border of flowerbeds, are several office buildings, including a Head Post Office, branches of the Ministries of Labour, National Insurance and Pensions, and bank and insurance office buildings; while a site is provided for a Town Hall; to the east of the centre is the Technical College and College for Further Education and also a recreation ground, while to the south is the Bus Station. South of this will be the new Railway Station, which in spite of strong representations by the corporation is a long time in coming. The plan is a happy combination of old and new; while it is governed by the logic of convenience. The architectural character belongs entirely to the mid-twentieth century although varying in excellence. This new centre has inspired many of the shop owners to provide some of the most up-to-date shops of their kind in the south of England.

INDUSTRIAL AREA

Diversification of industry has been one of the principles in planning the industrial area, a diversification which is necessary as previously stated to maintain employment so that the population shall be less at the mercy of a depression in one industry. It is also important to provide a variety of employment so that men and women are free to change their jobs. Thus the corporation has encouraged industries of four or five types. There were 79 factories in 1962 in the industrial area, representing a variety of industries which include engineering

¹See The Chairman's report for 1960. This had not been done, however, by the spring of 1963. In December 1961 the Urban District Council asked that Queens Square should be closed to vehicular traffic and made into a pedestrian precinct for an experimental period. In view of the success of the one-way traffic working, and of the legal rights of traders to vehicular access, the corporation was unable to agree to this (see 1961 report). It was agreed, however, that the council should formally adopt Queens Square, and when this is done the prospect of its becoming a pedestrian precinct will be stronger.

(31 factories), electrical and electronics factories (12), printing (7), food and pharmaceutical factories (7), plastics (9), woodworking (5), and metalworking (5).

Some of the factories have been built by the development corporation for letting, while others have been built by the firms themselves, on 99-year leases.

Visitors to the industrial area have been impressed by the attractive layout and the pleasing effect of the factories. Many of them are grouped on either side of a main avenue—Manor Royal—running east from the London-Brighton road, with lawns spread in front of the factories giving a fine spacious effect. Manor Royal widely forks at the eastern end where further factories are grouped. Some of the buildings are excellent examples of industrial architecture.

THE SOCIAL ASPECT

The population of Crawley, as of the other new towns round London, has migrated mainly from the inner and outer suburbs, the industrial firms moving out having taken a large proportion of their workpeople with them. Thus the population consists largely of young married couples between 20 and 40 with young children. They have exchanged a flat, lodgings or a small house in the suburbs for a house with a garden in a new town. From the standpoint of physical environment they have made a change for the better. For many it is the first time that they have had a house and garden of their own, and there is no longer a feeling of congestion in living conditions. Making a home of the house and cultivating the garden provides opportunities for leisure occupation, and there is plenty of evidence of enthusiastic gardeners. Some of the inhabitants may sigh for the old days in the inner London suburbs, but it is doubtful if the feeling is very deep because people rarely go back: over a ten year period only 0.2 per cent per annum have done so. The preoccupations of a house, the making of new friends, the convenience of the shops, the feeling that the country air of Crawley is healthy especially for their children, are important factors. Rather than go back, some of the people are wanting their old folk to come out; thus there is some demand for homes for old people which the corporation was anxious to provide as making a contribution to a balanced population. More than 270 parents have been housed in this way.

A criticism that might be made is that there is an insufficient mixing of different types of dwellings in the various neighbourhoods. Whole areas consist too much of small houses for similar income groups. A more generous sprinkling of houses for the slightly higher income groups would introduce a greater variety in the social and architectural aspects of the neighbourhood. Often it is found that people in the factories live in Crawley, but the executives, managers and directors tend to live in the villages and small towns of the surrounding country. It is true that the development corporation has built a few larger houses of this type, such as those at Three Bridges, and land has been made available to

private enterprise to build houses for owner occupiers, but the latter means some degree of segregation. It may be that this works better, and that when houses of this kind have been built by private builders more of the directors and managers will also live in Crawley. This has already happened in some degree at the estates built by Wates at Ifield and Gossops Green.

The success of any town or community depends in a large measure on how people spend their leisure, and it must be asked whether in Crawley there are adequate facilities for recreation and leisure pursuits? Much has been done but is it enough? There is a fair number of clubs and societies for various activities in each neighbourhood. A Community Association was already in existence before the town was built, and this helped to lead the way to the provision by the development corporation of a community hut in each neighbourhood except that in West Green which was provided by the County Council. These Community Huts are used for various activities, like those of drama groups, political, naturalist and other societies, art clubs and youth organisations, but they are a little primitive and resemble army huts of the First World War. There is already a cinema in the old town of Crawley but the project for a new one has been abandoned. Most houses have a television set.

A criticism has been made that these social, recreational and cultural activities tend to take place too exclusively within each neighbourhood, which are thus becoming socially self-centred, and that there is not very much combined activity of the neighbourhoods. One of the factors that determines a desirable size for a town is that it shall be large enough to support the cultural, social and recreational activities that many people ask of urban life. If these activities are to be confined to neighbourhoods of about 6,000 then this is largely defeated, for it will be found that such a small population would not be large enough to support some rather specialist societies. As a sociologist resident of Crawley, Mrs. Gillian Pitt, remarked in an article on Neighbourhood Planning in the *New Town*.¹ 'The specialist organisations draw on a small minority of a population for membership, and whereas in a town of fifty or sixty thousand this minority of interested people is enough to maintain a club, in a community of five to eight thousand, there are not enough to keep the specialist group in existence. In Crawley a club will be started by a group of enthusiasts in the belief that there will be enough interested people to maintain it, but they will be disappointed after a few months to find that people are unwilling to travel to another neighbourhood for a meeting. In many instances "unwilling" becomes "unable", unless you have your own means of transport, or enjoy long evening walks, as public transport facilities do not encourage travel between neighbourhoods. Bus services are provided to take people to and from the town centre, or the industrial estate at certain times, but there is no circular route round the town.'

¹Town and Country Planning, July–August 1959, pp. 263–265.

It is obvious from this that adequate facilities must be provided in the town centre, so that the few people from each neighbourhood interested in certain pursuits, can come together and form societies large enough to ensure a vigorous and successful life. The town as a whole could ensure the success of much that a neighbourhood could not. For example, a drama group in one neighbourhood might have a very weak and precarious existence, but if membership is recruited from several other neighbourhoods it might become a very successful group, and the place where its work should be done is obviously in the town centre to which journeys can easily be made. Unfortunately adequate facilities in the town centre like a good multi-purpose hall, and club rooms, are rather late in coming. Many social activities and voluntary associations would have a far better chance of developing if there were good meeting facilities in the centre of the town.

Chapter XIV

HEMEL HEMPSTEAD

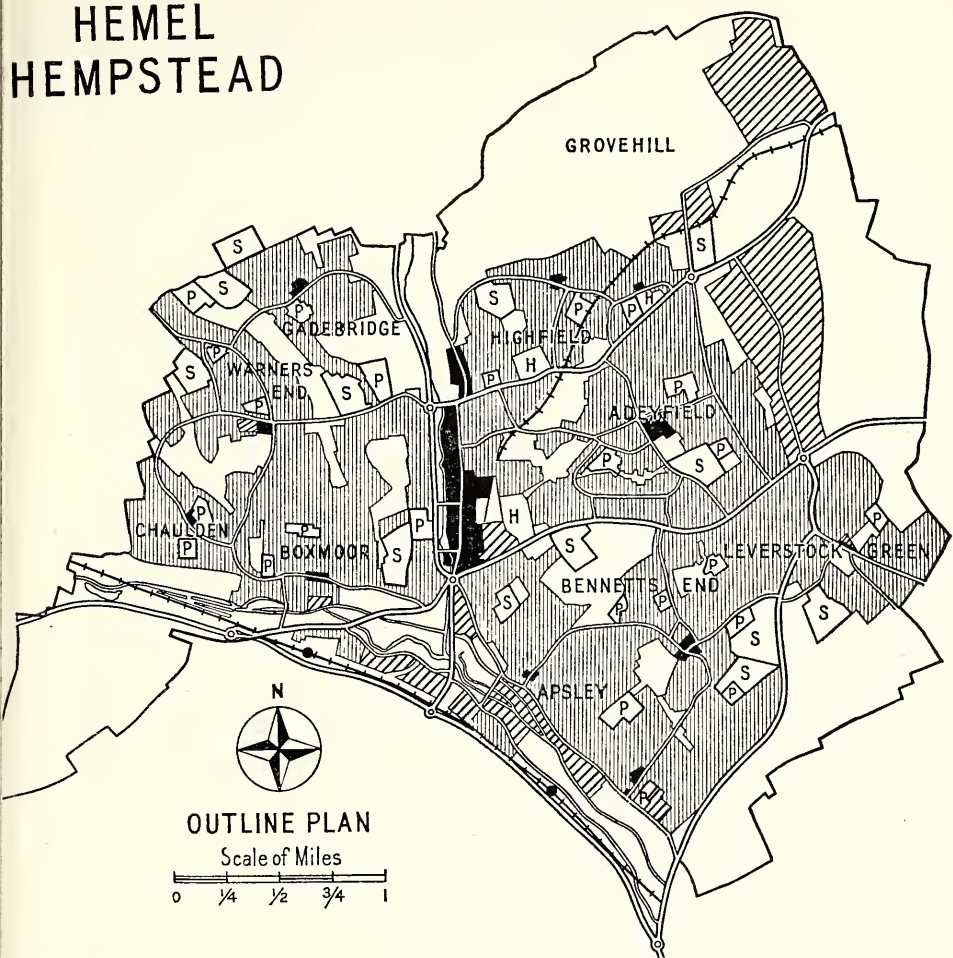
AMONG the proposed sites for satellite towns in Abercrombie's Greater London Plan was one a little south-west of the village of Redbourn, between the towns of Harpenden, St. Albans and Hemel Hempstead. This site was not adopted because, in the opinion of various government departments and the Advisory Committee for London Regional Planning, it would have brought the built-up area too near to the three neighbouring towns, with the risk of ultimate coalescence and of the loss to agriculture of an unnecessarily large area. The alternative of expanding the town of Hemel Hempstead from a population of about 21,000 to 60,000 was adopted, and the new town was designated on 4th February, 1947. The site is 5,910 acres and comprises the town of Hemel Hempstead and parts of the rural districts of St. Albans, Watford and Hemel Hempstead. It is about 26 miles from the centre of London. Along the valley of the Bulbourne, which runs west-north-westerly from Watford to Aylesbury, is the main railway line from Euston, the A 41 trunk road, and the Grand Union Canal. The old town of Hemel Hempstead, situated to the north of this valley about seven miles beyond Watford was of roughly pyramidal shape with the centre extending along the valley of the Gade and an industrial area to the south near the railway and the canal. The designated area of the new town lies north of the Bulbourne valley and the new residential areas surround the old town to the north, east and west but not south.

THE OUTLINE PLAN

The task of planning and welding in a satisfactory manner new urban areas to a very substantial old town is necessarily different from planning new towns like Stevenage, Crawley and Harlow, where the existing urban development is not so large as to preclude the complete application of the principles of new-town planning. In the case of Hemel Hempstead modifications and compromise are inevitable especially as the new neighbourhoods have to be planned round the existing town occupying the central area.

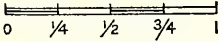
Mr. G. A. Jellicoe was appointed to prepare an outline plan, and his scheme was exhibited at the town hall in the autumn of 1947. Mr. Jellicoe acted as advisor for a further year and then his official connection with the work of planning terminated. Details of the outline plan were continued by the staff, and it was submitted to the Minister in August 1949, modified at his request, and published in September 1951, but was not

HEMEL
HEMPSTEAD



OUTLINE PLAN

Scale of Miles



RESIDENTIAL



INDUSTRY



TOWN CENTRE
NEIGHBOURHOOD CENTRES
AND SUB-CENTRES



OPEN SPACE AND
AGRICULTURAL LAND



MAJOR ROADS



RAILWAYS



SCHOOLS
PRIMARY



SECONDARY



HOSPITALS

FIG. 17

finally approved until June 1952, nearly $5\frac{1}{2}$ years after the designation and more than two years after the approval of the plans of the other three new towns designated about the same time. The development corporation stated in its report for 1949 that two matters caused delay in submitting the plan: the planning of the town centre and the siting of schools. It was pointed out that the former 'is a complicated and controversial issue in a town with already 21,000 inhabitants'; while with regard to the latter the corporation felt that 'greater flexibility in meeting possible changes in educational fashion might be achieved by grouped siting of secondary schools rather than separate siting adopted by most authorities.'

The plan consists of a new industrial area to the north-east, and nine neighbourhoods in all. Some of these include parts of the existing town; and they vary in size from about 5,000 to 11,400 population. Of the six principal neighbourhoods the largest is Adeyfield which lies to the east of the town centre. South-east is Bennetts End with a population of about 8,000, Warners End (6,250) and Chaulden (4,950) are to the west, and Gadebridge (5,900) to the north-west. A smaller residential district to the south, referred to as a sub-neighbourhood, is Apsley with a population of about 3,000. Boxmoor is a neighbourhood that consists mainly of the existing town; while what might be regarded as a ninth neighbourhood is Leverstock Green, at the extreme east just within the boundary of the town, and sufficiently close to be a part of it. Its rather pleasant character, of houses round a central village green, is to be retained. Each neighbourhood has a primary school, and there are secondary schools in Highfield, Adeyfield, and Boxmoor, while the principal campus is at Bennetts End where there are four schools: a grammar school, a secondary modern and two-form entry and one-form entry primary schools. Shopping centres are provided for most of the neighbourhoods, but these vary in character according to needs, because parts of the old town incorporated in the new already have several small shopping areas, as that, for example, in the southern part of Boxmoor.

The main thoroughfare of the old town, known as Marlowes, runs from south to north, and at the northern end is the High street, previously the main shopping centre. The river Gade winds roughly parallel with and west of Marlowes, and in the strip between the river and the road is the site of the new town centre which includes a market place, pedestrian ways, a service road at the back of the shops, and provision for new municipal and Government offices, a library, police courts and an assembly hall. The plan for the town centre involved considerable demolition of the property west of Marlowes, which was somewhat loosely built up.

Unlike the plans for Stevenage, Crawley and Harlow, where a start could be made on an almost clean slate, or where the existing built-up areas were so small as to be conveniently absorbed into the new plan, that for Hemel Hempstead is all the time subject to numerous adjust-



(a) The water gardens for which the River Gade has been utilised, situated immediately west of, and parallel to main street of shopping centre. These gardens were laid out to the plans of G. A. Jellicoe.



(b) Bank Court—One of the pedestrian ways of the shopping centre with a bronze statue of a discus thrower.

(c) A series of four large carved stone panels on a building which forms one of the notable features of the town centre. Sculptor: Professor A. H. Gerrard.

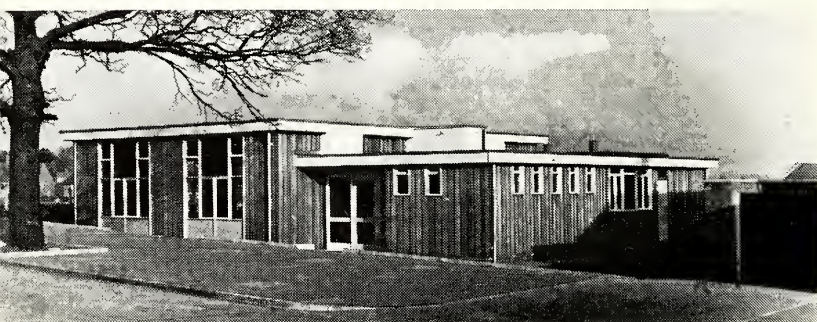




(a) Short rows of terrace housing fronted by spacious lawns.



(b) Bennettsgate, neighbourhood centre of Bennetts End, with fifteen arcaded shops. Also forming part of the centre is St. Benedict Church and the Golden Cockerell Public House.



(c) Chauldon Hall community centre of Chauldon, a neighbourhood of about 5,000.

(d) Detached and semi-detached houses at Adeyfield. These and many of the houses in the town, including those shown on the opposite page, were designed by H. Kellett Ablett, the chief architect of the development corporation.



Plate 20.
Hemel
Hempstead.

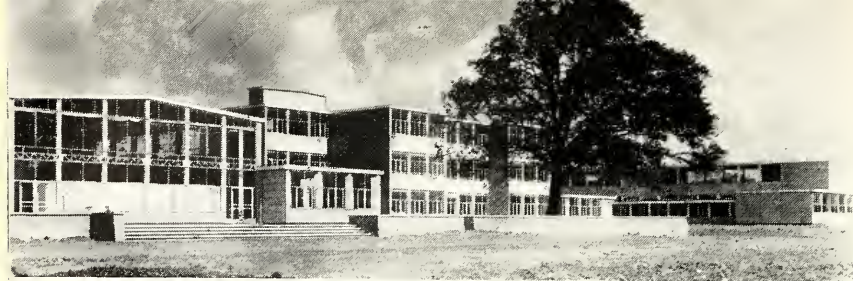


(a) Block of two houses (two and three bedroom types). The wall connecting with the neighbouring block gives a unity to the group.

(b) A row of two bedroom terrace houses; Gomerries Road, Warners End, in which good use has been made of contrasting facing materials and of the sloping road to obtain a stepped effect.

(c) Four bedroom houses in Chauldon.





(a) Apsley Grammar School, Bennetts End neighbourhood.



(b) Another view of the water garden near the town centre.

(c) Part of industrial area.

Plate 22. Hemel Hempstead.



ments, many of which are necessarily unforeseen, because of the comparatively large existing population. As the 1957 report says 'the Corporation is expanding and reconstructing an old town rather than building a new one.' The difficulties in pursuing the plan were considerable and it was necessary to keep it flexible to admit of adjustments. This raises the question discussed in the Final Report of the Reith Committee (10-15): the relative advantages of enlarging a town of substantial size, or of selecting for new towns sites with much smaller existing developments, and leaving towns of the size of Hemel Hempstead to grow more slowly, with governmental encouragement if need be. The rapid expansion of such a town involves much grafting, and is necessarily a more difficult process.

On the other hand the expansion serves the purpose of bringing the town up-to-date and of infusing new life into it. This appears to have happened, for the development corporation has revived Hemel Hempstead in a way which gives pride and satisfaction to its elected authority. As will be seen later the grafting has been accomplished with happy results socially.

BUILDING THE TOWN

There was much opposition to the new town and, as in the case of Stevenage and Crawley, the validity of the designation order was challenged, in this case on the ground that there had not been adequate consultation with local authorities as required by the New Towns Act. The case was heard in July 1947, about a fortnight before the Crawley case, and the opposition was unsuccessful.

Building the town was slow in starting because of the uncertainty created by the litigation, the restrictions in building caused by the economic crisis of 1947-48, and the delays in finalising the outline plan. When, however, house building did start in April 1949 progress was, rapid, so that by the end of 1953 some 3,861 houses had been built, more than in any other new town. From 1953 onwards progress was steady at a little over a thousand houses a year—about 1,268 in 1954, 1,075 in 1955, 1,482 in 1956, and 1,195 in 1957. In 1958 there was a drop, owing to the slight economic recession of that and the previous year, to 815, to recover to about the thousand mark from 1959 to 1962. By the end of 1962 about 13,214 houses had been built, the greater proportion, some 10,456, by the development corporation, 1,444 by the local authority and 1,314 privately.

The first neighbourhood to be built was the largest, Adeyfield in the east. There was already a population of about 1,500, and the neighbourhood was nearing completion by the end of 1953. Bennetts End was started shortly after Adeyfield, and was followed by Chaulden and Warners End, so that by the end of 1958 these four neighbourhoods were almost complete. By the end of 1959 Gadebridge was half completed and building had commenced in Highfield, the last of the six principal neighbourhoods. The shopping area on the west side of

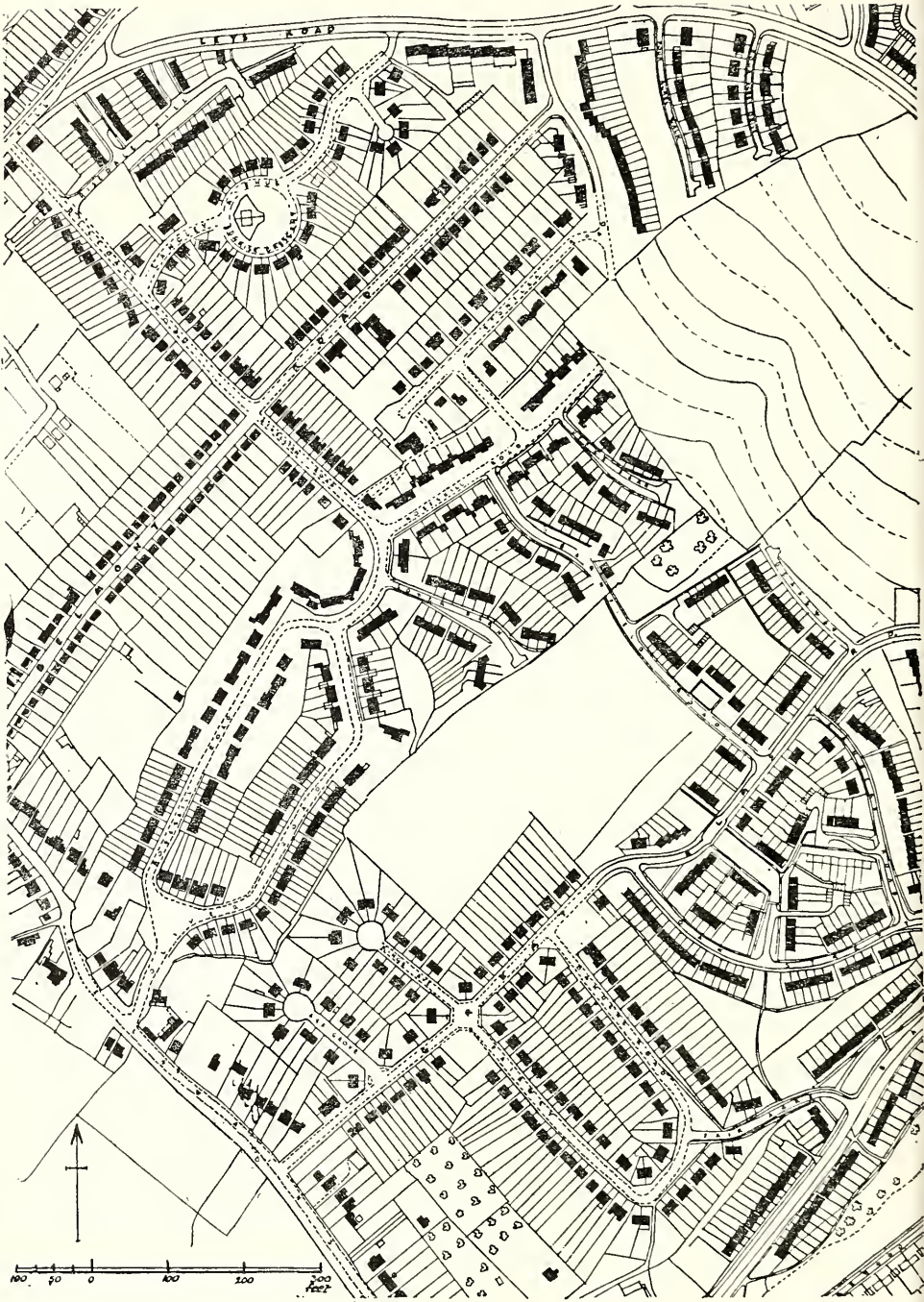


FIG. 18—Hemel Hempstead—Bennetts End, the second neighbourhood to be built (completed 1956). Contours influenced the housing layout which is of considerable variety.

Marlowes in the town centre had been completed by the end of 1958, and considerable progress had been made on the east side. The building of the industrial area has kept pace with the housing and has been more than sufficient to provide employment for those living in the town. Such has been the progress in building the town that the development corporation was able to say in its report of 1959 that 'When the corporation was set up in 1947 it was estimated that the town would be built in fifteen to twenty years. It now seems certain, apart from some quite unforeseen contingency, that another three years, or fifteen in all, will see the completion of the work, this despite the fact that no construction was possible in the first two years owing to national economic restrictions.'

HOUSING AND RESIDENTIAL AREAS

A wide variety of houses has been provided in Hemel Hempstead, something like a hundred different types having been designed, about half by the corporation's architects' staff and half by independent architects working for the corporation. The smaller houses, from 750 to 1,000 sq. ft., which form the majority, are built mainly in terraces, at about 12 to the acre in Adeyfield, and at about 15 to the acre in the other neighbourhoods. These terrace blocks are mixed with a few three-storey flats and some one-storey houses for old people. The accommodation is roughly in the proportion of 33 per cent of 2-bedroom, 47 per cent of 3-bedroom, 10 per cent of 4-bedroom and 10 per cent of flats and old people's bungalows. In addition there is a proportion—between a fifth and quarter of the whole—of semi-detached houses of about 1,000 sq. ft., with garages, and a small proportion of larger detached houses some of which were built for sale.

Many of the houses are attractively designed. The different types, layouts and different facing materials have all contributed to variety. Brick is often used in contrast with pale cement rendering, painted weather-boarding, and tiles. When, however, brick is unrelieved for a considerable number of houses of a similar design, especially if they have small windows, the effect is apt to be monotonous. It is better where the lines are broken by hilly ground, or by echelon treatment or irregular siting. As in all the new towns, with units of a similar size, a great problem has been to avoid sameness. It is generally achieved most successfully by a variety of layouts, but it must be remembered that if groups of brick houses sometimes appear monotonous, they will appear much less so in a few years' time when trees have grown and given a richer decorative pattern.

The winding road, the close, the cul-de-sac, the irregular alignment of houses, grouped round differently shaped spaces adjacent to the roads, have all been employed to give variety to the residential areas. This has often been assisted by different contours, particularly in the north-western areas. An example at Adeyfield is the layout along Windmill Road and Homefield Road. On the side of the former the

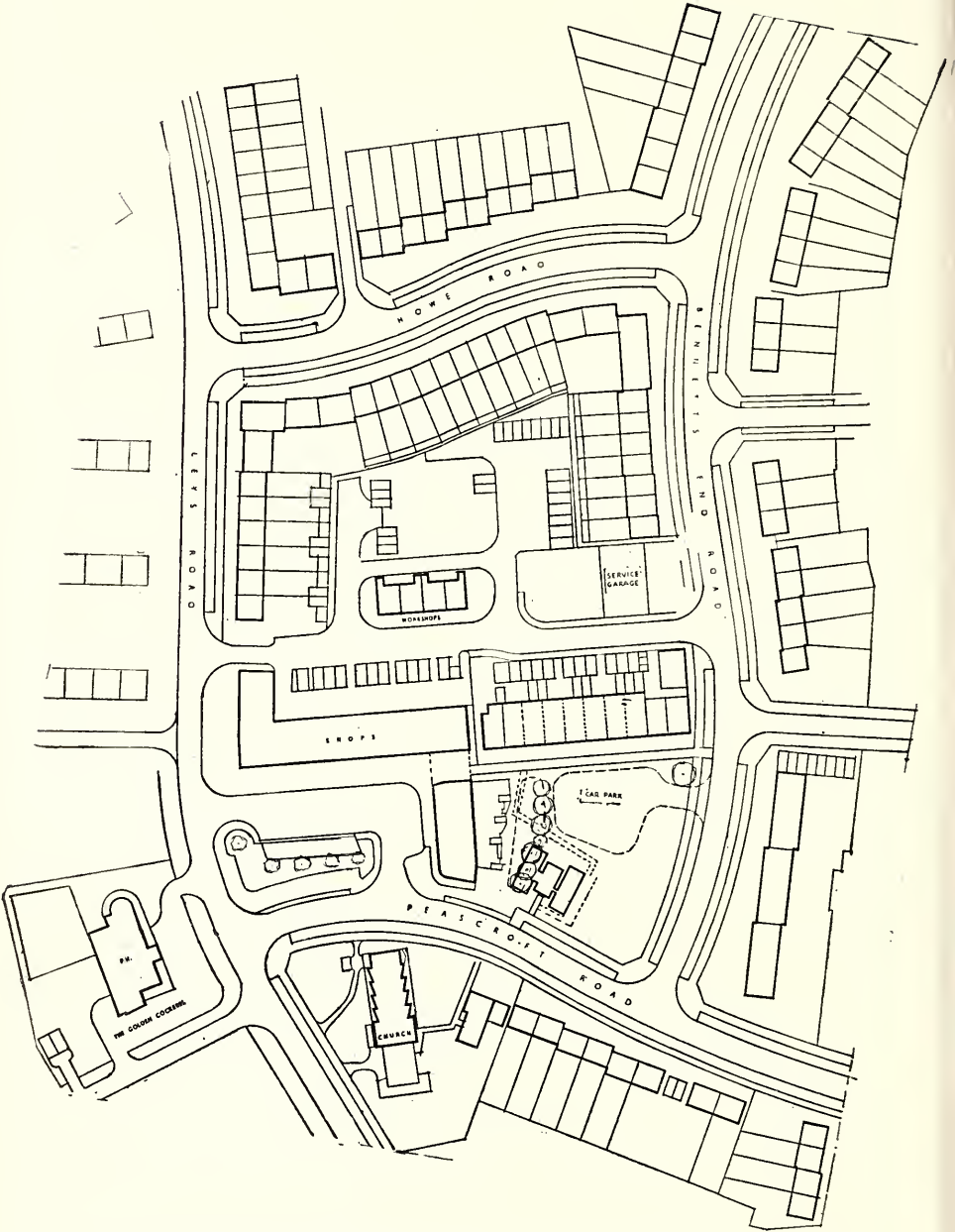


FIG. 19—Hemel Hempstead—Bennetts End. Centre and immediate surroundings.

close has been a motif and three closes are arranged along the north side, each differently planned, with terrace blocks facing on to them with space for allotments at the rear. On the north side of Homefield Road is a totally different arrangement. On an island site terrace blocks face outwards, and the inner areas are devoted to allotments at one end and children's play spaces at the other, with two rows of garages. A little further to the south-east are some blocks of flats facing on to a garden served by a loop road.

Another example of interesting irregular layout is the very pleasant grouping in the area bounded by Warners End Road, Spring Lane and Boxted Road in the Warners End neighbourhood. Here a small cul-de-sac terminating in a small close, called Winding Shot, runs off Spring Lane. This close is connected by a footpath with another cul-de-sac called Peartree Close. In addition to existing trees, others have been planted, and the whole creates the impression of a delightful haphazard mixing of houses, trees and grass patches. It is one of the effects of which there are many in Hemel Hempstead that give the impression of happy accidents, but which we know are the results of careful artistry.

More formal, by contrast, is Goosecroft which runs off Micklem Drive, in Warners End. Here smaller terrace houses are arranged on either side of regular rectangular greens, further from the road and closed by a short terrace block. Another attractive formal arrangement is the curve of a terrace block of three-storey houses at the end of Long John in Bennetts End. This suggests that it is easier to obtain a good effect with a long curved block of three stories than of two. Indeed some of the most successful housing in Hemel Hempstead from the standpoint of appearance is in the three-storey terrace blocks, either of houses, or of two-storey maisonettes over old people's flats as in Warners End and Chaulden.

NEIGHBOURHOOD CENTRES

Adeyfield being the largest neighbourhood logically has the largest local centre. It was the first to be completed and consists of a square through which a road runs diagonally. On two sides of it are 28 shops with continuous canopies and flats over, making three-storey buildings of a height that gives a satisfactory scale. On the opposite corner of the square is the 'New Venture' public house, and nearby is a community centre comprising a public hall, branch library and maternity clinic, while in the opposite corner is the architecturally very interesting church of St. Barnabas. At the rear of the shops is a group of buildings for service industry. For a neighbourhood centre the square is large; the road through its centre and the triangular car parks rather preclude that feeling of intimacy so desirable in such a centre. One can imagine the total elimination of vehicular traffic and the square made into a pedestrian precinct with trees and flower beds, and a corner for children. A delightful place might become even more so.

The Bennetts End centre is similar but smaller with fifteen shops in

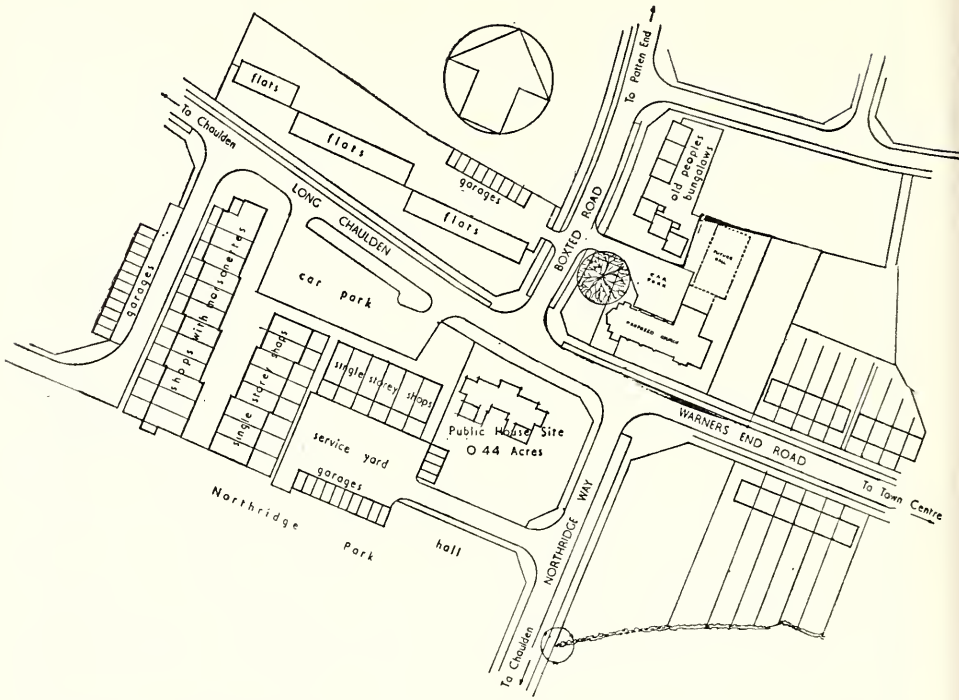


FIG. 20—Hemel Hempstead—Warners End neighbourhood centre. This centre is on high ground with a view of the town to the south. Part, leading to Northridge Park, is a pedestrian shopping way.

three-storey buildings on two sides of a square. In the middle is a grass area, on sloping ground, encircled by the roadway. Opposite across Peascroft Road is St. Benedict church and across Leys Road is the 'Golden Cockerel' public house. The shop buildings are arcaded, so that the upper part comes forward, which seems more satisfactory architecturally than the projecting canopy. It might have been better if the green had been spread out from the footway in front of the shops and the car park kept to the further side. But these two centres were built fairly early before the present awareness of the destructive intrusion of the motor vehicle.

The centre at Warners End provides a greater degree of seclusion for the shopper, as a pedestrian way runs off the recessed space on the south side of Long Chaulden. On the west side of this way maisonettes are built over the shops and on the east side along the front facing the car park are single-storey shops, making a total of 26. At one end is 'The Top of the World' public house, while opposite on a corner site is the church of St. Alban. The centre at Chaulden is different again with a circular row of nine shops in a three-storey building with maisonettes above, and with a projecting canopy. A church and public house, the 'Tudor Rose', completes the centre.

A criticism that must be made of these centres is that they are not sufficiently pedestrian precincts, not sufficiently withdrawn from dangerous traffic.

THE TOWN CENTRE

In all the larger new towns with the exception of Hemel Hempstead the town centres have been planned and built on new land, and thus from scratch. Such freedom has not been possible at Hemel Hempstead. Here the new centre has been based on a built-up area in the old town consisting largely of light industry and shops. Its creation has thus involved a good deal of demolition of existing property and the reaccommodation of a number of traders and owners. Considering these difficulties it has been built very quickly.

The old town shopping centre, which is being preserved, is mainly round the High Street, in which is the Town Hall and St. Mary's Church. The new centre is placed south of this, stretching the whole length of Marlowes from Bury Road southwards to the roundabout where five roads meet, a distance of about $\frac{3}{4}$ mile. Parallel with Marlowes on the west will be the new Cotterells Road, planned as one of the major town roads to connect northwards with Leighton Buzzard. Between Marlowes and Cotterells Road, some $\frac{1}{4}$ mile, is the river Gade, while new roads have been provided, several transverse east-west roads, and one following the course of the river for about half the distance. The major part of the centre, much of which had been completed by the end of 1959, lies between Marlowes and Cotterells Road, while the remaining development is taking place on the east side of Marlowes.

Grouped at the north end are the police station, public library, an assembly hall called 'The Pavilion', and a new town hall. On the south side of Combe Street are a new cinema and a block of offices, and then the shops, occupying the long area between Marlowes and the new Waterhouse Street. At the northern end is the market square, adjoined by the bus terminal.

As a shopping centre it has much of the character of the long village street, except that there are also shops arranged transversely in depth, thus giving a series of short pedestrian shopping ways. The long central shopping street resembles more the old haphazard development than the precinct conception as realised in Stevenage and partly realised in Crawley and Harlow. Also it has the disadvantage of an important through road in the centre of the shopping area, for although Cotterells Road is intended as the main through road, there is no guarantee that Marlowes will not be used as such. It would be a considerable improvement if the central stretch of Marlowes could be changed to a pedestrian way. Still there is much in the Hemel Hempstead centre that is aesthetically very good. Many trees have been preserved which add to the attractiveness, enhancing especially the pleasant character of the market square—a colourful sight on market days with its varied stall canopies.

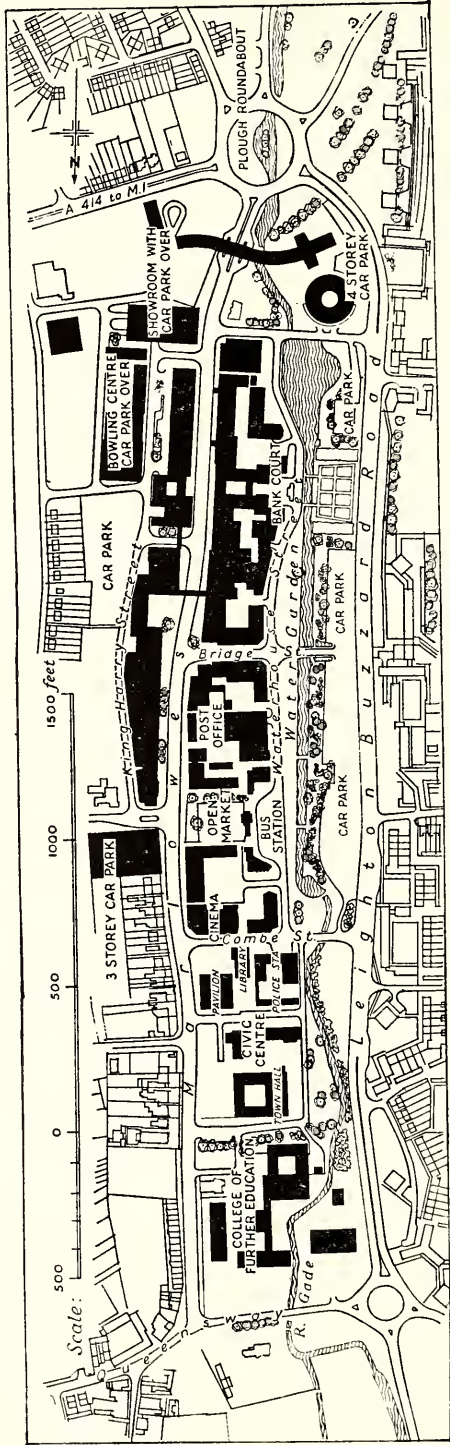


FIG. 21—Hemel Hempstead Town Centre. A water-garden, for which the river Gade is utilized, runs parallel with the Marlowes, the principal shopping street, and between them are shops and other buildings.

The stretch of country immediately west of the town centre, through which runs the river Gade, has been made into very attractive water gardens, designed by G. A. Jellicoe, well known as a landscape architect. Hemel Hempstead is the only new town with a river near its centre, and full and effective use has been made of this natural amenity. Lawns spread to the river which is crossed by several small pedestrian bridges, and on its further side are footpaths among trees, while at the southern end the river broadens to a lake. There is nothing formal about the layout; everything has been done to give it the semblance of an entirely natural feature, and the result is wholly delightful.

In addition to the shops and the various recreational facilities that are provided in the centre several large blocks of offices have been built, one six-storey block on the east side of Marlowes for the Ministry of Transport, one near the water gardens, while there are considerable extensions to Sir Robert McAlpine's offices. Thus the town is contributing partly to commercial and administrative decentralisation as well as industrial. It is expected that the amount of office employment will ultimately be in the region of 2,500.

INDUSTRIAL AREA

The industrial area to the north-east beyond Adeyfield, is some 200 acres spaciouly planned, the factories being placed on either side of a principal avenue and along adjacent roads. They vary considerably in size from the largest, that of Addressograph-Multigraph employing about 2,000, to some quite small. About fifty-six firms have factories here, denoting a fair diversification of industry, with a preponderance of light engineering. In some cases firms have built their own factories, in others the development corporation has built them to the firm's requirements. Some standard factories have also been built, and have proved an attraction to many firms.

As in many of the new town industrial areas the general architectural effect of the factories is pleasing. Most of them are fronted with offices which face on to the roads, but the factory sections which in many cases are partly apparent from the road generally integrate well with the office blocks—an architectural advance on many factories built between the two world wars, where often a handsome symmetrical pseudo-Renaissance office block is backed by a series of sheds.

Where factory buildings are fairly low, either of one or two stories, it is difficult to avoid sameness, but this has been partially avoided by varying the heights of the different parts of the buildings so as to break continuous horizontal lines from one building to another. Also the different treatments of the factory front gardens with their lawns and flower beds and little ornamental walls all give notes of variety. One could wish for an occasional block rising a bit higher, but industrialists generally seem to prefer the one-floor factory. An occasional multi-storey factory would give a greater degree of architectural variety.

SOCIAL ASPECT

The first question that inevitably presents itself when a new town is grafted on to an existing old town, with long history and many traditions, is: how did the newcomers mix with the old inhabitants? The question has more point in Hemel Hempstead than in any other new town, because no other had so large an existing population with such deep roots. Welwyn Garden City, although it had almost as big a population as Hemel Hempstead at the time of designation, is a in different category, because it began as a new town in 1921, and its designation as such nearly thirty years later meant a continuation of its planned growth. Hemel Hempstead, on the other hand, was a centuries-old town well known in the reign of Henry VIII. Here, therefore, we have the impact of the old and new.

All the available evidence shows that the mixing has been very successful. Indeed in the 1957 report the corporation was able to quote the Mayor of Hemel Hempstead as saying "There is a far greater sense of unity between the various communities of the borough than there ever was before the new town started."

There were a fair number of recreational, cultural, women's and youth organisations active in the old town; several more came into being as the neighbourhoods were completed and these have coalesced in various ways. In Adeyfield, the earliest of the new neighbourhoods, some 30 organisations had grown up and temporary accommodation had been provided before the permanent community hall was built. A neighbourhood council was formed on which the various social and other organisations were represented. The same thing occurred in Bennetts End, and later the neighbourhood councils were represented on the Hemel Hempstead Council of Social Service. This is obviously an attempt at the integration of the activities of the various neighbourhoods and to avoid the neighbourhood isolation in danger of occurring at Crawley. Community buildings have now been provided at Adeyfield, Bennetts End and Chaulden.

In addition to these neighbourhood activities the large new hall called 'The Pavilion' offers a coalescing centre for various neighbourhood activities—the kind of hall considered to be much needed at Crawley.

On the whole the development of social and recreational life in Hemel Hempstead is such as to make it a subject for emulation rather than criticism.

Chapter XV

HARLOW

HARLOW was one of the ten satellite towns which Sir Patrick Abercrombie proposed in his Greater London Plan. Among the reasons that he gave for this choice was that it has fine potential features, with good access from the proposed new London to Cambridge arterial road and from the existing London-Epping-Bishop's Stortford Road; 'it is relatively near to the overcrowded East End industrial areas and should prove for that reason an attractive one to develop.'

The site of 6,320 acres was designated on 25 March 1947. It is about 23 miles north-east of London and lies to the south of the Stort valley and the railway line from Liverpool Street to Cambridge. Roughly rectangular in shape, it includes the old small town of Harlow to the east, and the hamlets of Netteswell Cross, Little Parndon and Potter Street, having then a total population of about 4,500. The land is gently undulating and in parts well wooded. Beyond the Stort Valley to the north are the Hertfordshire hills, to the west a tributary of the Stort, Canons Brook, runs south, while another tributary, Todd Brook, runs east-west across the site parallel with Stort Valley. This very pleasant country was described by the development corporation in its first report as exceptionally beautiful.

OUTLINE PLAN

Early in 1947 Frederick Gibberd was appointed by the Minister of Town and Country Planning to prepare a master plan. This was published in August of that year, and submitted to the Minister for approval in January 1948.

In making this plan Gibberd appears to have been fully conscious of the beauty of the district and in his plan he has preserved several stretches of country in their natural state. 'Whereas it is proposed that a rural environment is to be turned into an urban one,' he says, 'the design seeks to preserve and develop the natural features which give the area its particular character; the valleys, brooks, woods, clumps of trees, are all therefore retained as "pegs" on which the design is hung'. Thus 'the valley and hills on the north of the River Stort are to be left in their natural state', as are Canons Brook valley and Todd Brook valley, while Netteswell Cross valley on the north side will form a town park. The beauty of the site and the desire to preserve parts of its rural character obviously influenced the plan, so that the natural landscape becomes a part of the town. This has meant a generous interspersion of

HARLOW

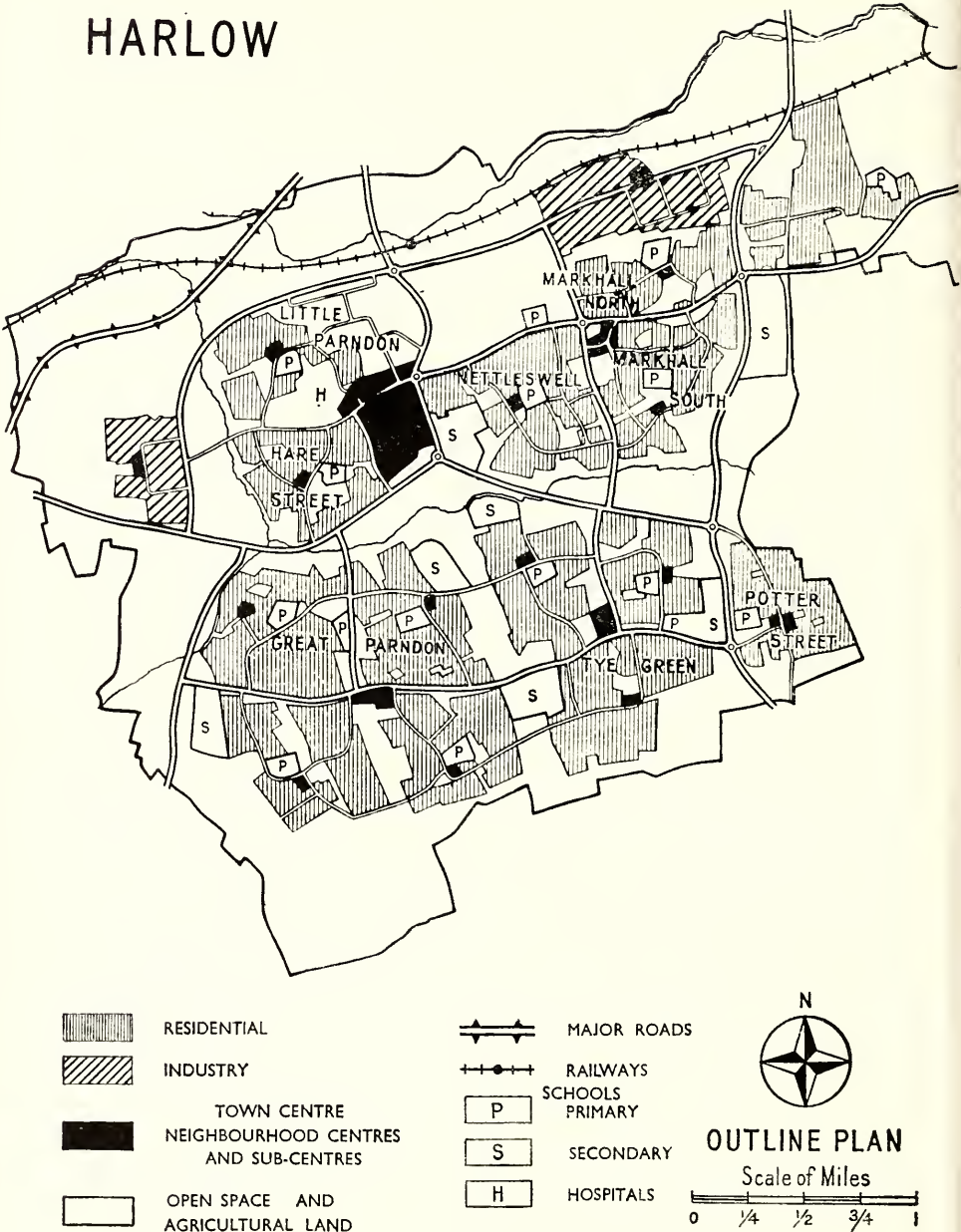


FIG. 22

open space, broad green bands being brought in between the main residential groupings.

This has prompted the same criticism that has been made against Stevenage, with its broad valley: that the town is too much of a sprawl with a lack of general compactness; but the advantages of this close juxtaposition of the natural countryside with housing areas in these conceptions greatly outweigh the disadvantages, while in Harlow, because of this introduction of green wedges into the town, the residential areas have been very compactly planned. The aim in the plan for Harlow has clearly been to mingle town and country, the urban with the natural environment—to make, in fact, a garden city. Gibberd said that ‘this broad flow of landscape in between the groups of buildings gives people a chance to drive and walk about the town in natural surroundings; it stops the town closing up into one vast mass of buildings and it gives a fine contrast between the work of man and the work of God’.

The town was originally planned for a maximum population of 60,000, but because of the compact planning at the comparatively high net housing density of 50 persons (about 15 houses) an acre, with 20 per cent of flats included for ‘sociological’ and architectural reasons, it was found that that number could be accommodated in a smaller area than was designated, making it unnecessary to develop parts of some of the neighbourhoods. (See report of the development corporation for the period ending 31st March 1950.) As the provision of services for a town of 60,000 would be on almost the same scale as that for 80,000, it was considered more economical to increase the maximum to the latter figure, and this has been done.

There are four main groupings in the plan, occupying roughly the four main quarters of the rectangle, like the four quarters of a shield, divided by broad green bands. These groupings include fourteen residential areas with an average of about 5,700 each. Each main grouping has a major neighbourhood centre with the exception of the group of two to the north-west where the town centre is situated, while each residential area has a sub-shopping centre, and a primary school nearby, and seven secondary schools are provided in the dividing green belts. There are two main industrial areas, the larger to the north-east just south of the railway and on either side of a road that runs parallel with it, and a smaller area to the west of the town. In addition there are five service industrial areas, one near the station to the north of the town centre, one near that centre, and one each adjacent to the major centres in the north-east at the Stow, in the south-east at Bush Fair and in the south-west at Great Parndon. The major town roads run through the green bands, radiating from the town centre and factory areas, and are really parkways, while cycle ways and footpaths are introduced independently of the roads and follow a similar system of radiation; but these take more direct routes through neighbourhoods.

One question that should be asked regarding this generally admirable

outline plan is whether the town centre is in the best place. In a town covering a considerable area, as this does, it is an advantage, as has been previously emphasised, to have the centre as nearly as possible geographically central; otherwise dwellers on the periphery will find it too far away. The centre at Harlow is situated well to the north-west, so that residents in old Harlow to the north-east, and those at Potter Street to the south-east, are two to three miles away, which is too far. It may be said that in this respect Harlow suffers from the same fault as Stevenage, although not to the same extent, while neither has the same convenient plan in this respect as Crawley.

BUILDING THE TOWN

Little opposition was encountered to the proposal to build the new town of Harlow; it was much more fortunate in this respect than Stevenage, Crawley and Hemel Hempstead. The master plan was submitted to the Ministry of Town and Country Planning in January 1948, and at the public inquiry held in July of that year there was no opposition and the proceedings were merely formal. The proposed sequence of building was from the north-east westward; and then from the south-east westwards. The first neighbourhoods to be built were therefore the group in the north-east, Mark Hall North and South, and Netteswell, while several factories in the area north were built at the same time. By the end of 1956 this north-eastern group was completed, by the end of 1959 the north-west group, and good progress had been made with the third group to the south-east. The rate of house building seems to have been as rapid as that of any of the new towns. The approximate figures for these years 1954 to 1957 including a small proportion by the local authority, were 2,130 in 1954, 1,780 in 1955, 1,740 in 1956, and 1,900 in 1957. There was a drop in 1958 to about 1,150, and in 1959 to about 940 owing to restrictions in capital expenditure. In 1960 the total rose to 1,080 and in 1961 to 1,120, and in 1962 it was 890. By the end of 1962 about 16,140 had been built of which the development corporation had built about 14,835. The population had increased from its original 4,500 to about 60,600, thus well over half way. Much of the shopping area in the northern part of the town centre had also been completed, and factory building had kept slightly ahead of housing.

Water supply from the existing sources of the Herts and Essex Waterworks Co. Ltd. proving inadequate, wells were sunk at Hadham Mill, Sacombe and Thundridge in Hertfordshire while a four-million-gallon storage reservoir was built at Rye Hill within the town boundary. The three sources of supply are regarded as adequate for the future needs of Harlow.

HOUSING AND RESIDENTIAL AREAS

As previously indicated the residential areas are built at an approximate net density of 50 persons per acre. To obtain this with reasonably sized gardens for the single-family houses it is necessary to provide for

about 20 per cent of flats, but owing to their unpopularity this proportion is generally somewhat less, while a large proportion of the family houses are in terraces at 14 to 15 to the acre. The flats are mainly in three-storey and four-storey blocks with the exception of two tall 'point' blocks of 12 storeys east and west of the town centre and one 9 storey block 'The Lawn'. Some of the larger houses with four and five bedrooms are of three storeys while a few for old people are one-storey.

The chief architectural units in the residential areas appear to be the terrace blocks and blocks of flats of varying lengths, mixed with a smaller number of semi-detached or detached houses. The terrace blocks, generally straight, are for the most part sited obliquely to the major town roads, and are reached by minor roads that run parallel with them. Sometimes they form three sides of a square or rectangle. For example, in Mowbray Road, Mark Hall North, which runs approximately east-west, most of the terraces run transversely on the south side,

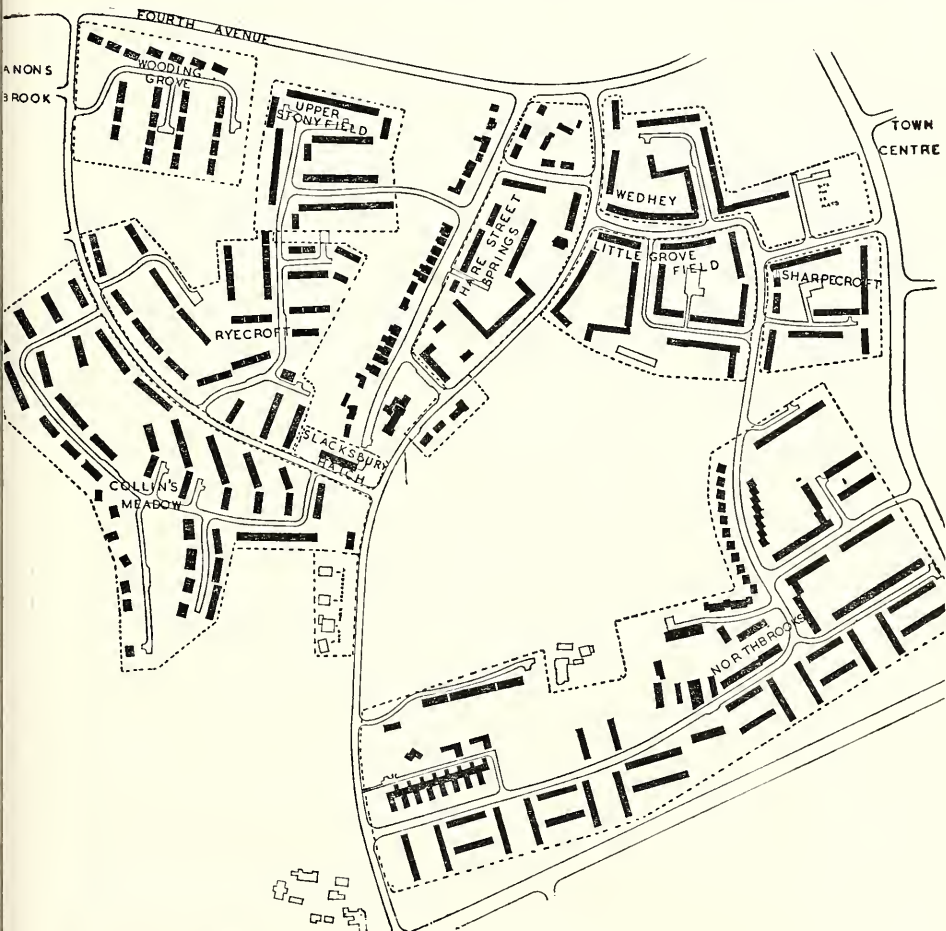


FIG. 23—Harlow—Hare Street, residential area west of the town centre. It consists chiefly of terrace housing, with a proportion of semi-detached and detached housing and a few flats.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

and the effect of terraces abutting endwise on principal roads is a characteristic of the housing layout.

There is a sense too of segregation of the neighbourhoods from the main town roads which run between them. For example, Netteswell lies to the south of First Avenue, one of the main roads of the town, and the rows of houses abut on this road endwise or diagonally; the areas between are masked from the road by walls, a separation that continues with a varied layout either by means of the walls or by belts of trees. Many of the blocks of flats are designed with a kind of open colonnade on the ground floor which gives glimpses of the scene beyond, often an attractive effect. One such is to the north of Mowbray Road where the flats are situated at the top of rising ground, and the glimpse through the open colonnade is of groups of houses on descending ground with the wooded landscape beyond.

The pattern of long straight blocks involving the repetition of a very simple unit, although generally well proportioned, runs the occasional risk of monotony: a little more variety here and there would have been welcome. It may be that when the trees, which have been generously planted, spread their foliage some further notes of variety will be introduced. The terraces at Pittman's Field in Netteswell that surround the

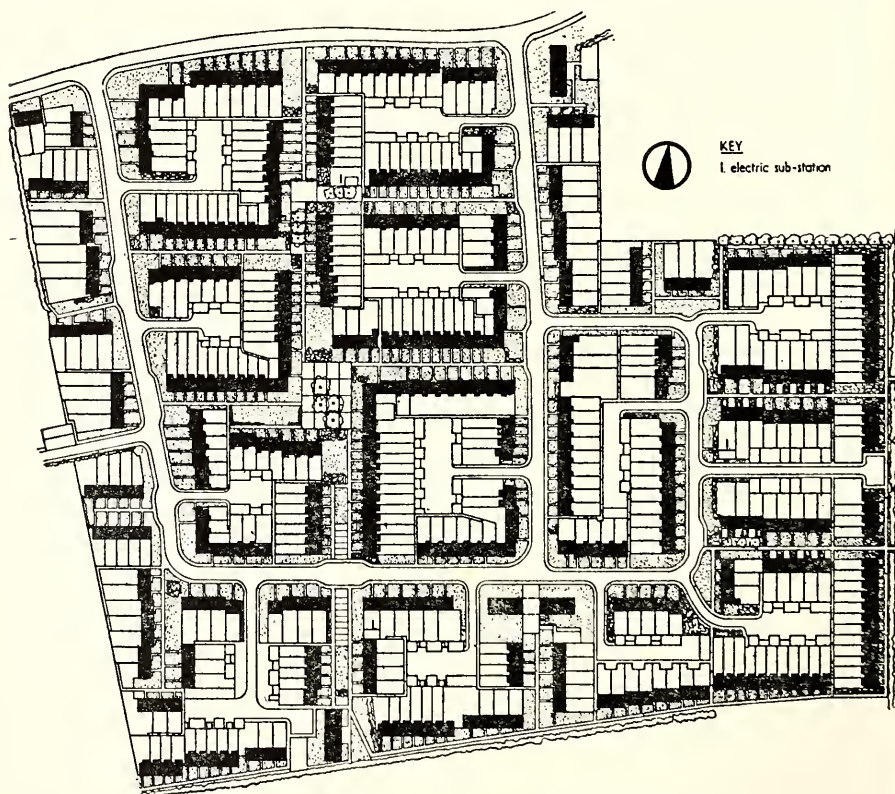


FIG. 24—Harlow—residential area in which culs-de-sac are at the rear of houses with garages, with footpaths between the fronts of houses—an adaptation of the Radburn system.



(a) The Market Square ('Stone Cross') of the town centre ('The High').



(b) Mark Hall Park with 'Family Group' in Hadene Stone by Henry Moore to the right. Because of the enterprise of the Harlow Art Trust, Harlow is particularly rich in public sculpture.

**Plate 23.
Harlow.**

(c) Broad Walk. A pedestrian shopping way running south from the market square.





(a) Part of the Stow shopping centre that serves the north-eastern group of neighbourhoods. The building in the centre is the Harlequin Restaurant and Dance Hall.



(b) Hugh's Tower, The Hides, one of the two twelve storey blocks of flats near the town centre, designed by Frederick Gibberd, the planner of the town.

(c) Prentice Place, neighbourhood centre of Potter Street. The building on the right is a clinic and group medical practice centre.

Plate 24.
Harlow.





(a) Three bedroom houses and—in the distance—two storey flats in Broomfield. These and the other houses shown on this page were designed by Frederick Gibberd.

(b) Three bedroom terrace houses in Mark Hall Moors.

(c) Two, three and four bedroom houses in Potter Street.



Plate 25.
Harlow.





Plate 26. (a) Edinburgh Way factories in the Temple Fields industrial area.
Harlow.



(b) Netteswell County Secondary Modern Grammar School. Architects Henning and Chitty.

(c) Waiting room of Sydenham House, one of the clinics provided by the Nuffield Provincial Hospitals Trust.





(a) Aerial view of town.



(b) Ward. A shopping centre with eleven shops. A Methodist Church is opposite and the 'Oak Tree' Public House is nearby.

Plate 27.
Newton Aycliffe.

(c) Group of terrace housing round one of the extensive 'village greens'.





Plate 28. Newton Aycliffe.



(a) Three bedroom houses, St. Godric's Road.

(b) A row of patio houses in Cumby Road in B2 precinct.

(c) Some middle-income group houses and old persons bungalows.

(d) Three storey flats for single women in St. Godric's Road.

rectangular grass area in which is Willi Soukops bronze Donkey make a pleasant arrangement, but rows of simple houses with the frieze of windows are a little monotonous. Front gardens with divisions are rare, most being open stretches of lawn which look well in a general effect. The back gardens are rather small as is inevitable with a density of fifteen to the acre, and it may be wondered whether the majority of tenants would not have preferred larger gardens at some sacrifice of the green wedges that traverse the town.

Generally, however, a good deal of variety in house design and layout has been achieved. This has been helped by the various housing groups having been designed by different architects.

THE NEIGHBOURHOOD CENTRES AND SUB-CENTRES

Two neighbourhood centres have been built, one The Stow for the north eastern group, and the other Bush Fair for the south eastern group, while there are several sub-centres. These sub-centres follow the pattern found in the other new towns, and often consist of a row of shops, a public house and a church with a primary school not far away. Thus at Ward Hatch in Mark Hall North there is a row of shops on the south side of Mowbray road, with a public house, 'The White Admiral', at the west end and a church at the east end with a primary school opposite. At Fisher's Hatch sub-centre at Netteswell, there is a row of shops with a public house, 'The Garden Tiger', at the north end, and a church at either end with a primary school nearby. Prentice Place, the shopping centre of Potter Street, is an attractive group forming three sides of a square with a tree in the centre and maisonettes over the shops. This centre includes a clinic. All these sub-centres are conveniently grouped on one side of the road.

The centre for the north-eastern group of neighbourhoods is The Stow, in the north-west corner of Mark Hall South. It consists of a narrow principal shopping street curved somewhat like an S, with shops on either side, a group of service industries to the west, a church, library, health and community centre, public house, and a dance hall. The unsatisfactory feature of this shopping centre is that a road runs through and there is nothing in the nature of a pedestrian precinct in which all shops are accessible without crossing a road. The development corporation rightly wished this to be a pedestrian way but apparently the opposition in the early days was too strong. The shopping blocks are of three storeys with the first and second storeys projecting beyond the ground floor, thus providing an arcaded shelter for the shoppers, but the architecture of the facades is a little dull.

Bush Fair, the centre in Tye Green, which provides shopping for the south-eastern groups of neighbourhoods, came later and is more satisfactorily planned. Here the shops face on to a fairly large pedestrian precinct with service roads on the circumference serving the rear of the shops. At one end is a public house. Grouped on either side of the centre

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

are car parks and garages, while to the east is a group of service industries.

TOWN CENTRE

The town centre, called 'The High', is spaciouly planned. It consists essentially of several rectangular plots on which buildings are formally grouped, with periphery roads. Thus there are several spacious areas for pedestrians free of vehicular traffic.

At the north end is the Market Square, round which are shops, some of those on the west side being on two levels. To the south of this is East Gate road which runs east-west through the centre. Running off this road opposite the Market square is a wide pedestrian way between shops, called Broad Walk. Branching off this in both directions are narrower pedestrian ways called Little Walk and East Walk. At the south end of Broad Walk is another east-west road across the centre; south of this are further shops, a library and offices; and beyond is the Civic Square round which are grouped the town hall with offices and council chamber to the east, while a museum, art gallery and restaurant on the south side, and an assembly hall on the west side have been planned. Beyond the last mentioned is the Harlow College for Further Education. St. Paul's church occupies the site on the north-west corner of the Civic Square. One cinema has been built on the north west corner; a site for a further cinema nearby was originally planned, but it is doubtful if it will ever be built. The centre will include four public houses, of which one, the 'Painted Lady', has been built, and an hotel to the east. The bus station is on the east side parallel with Broad Walk, and car parks are provided on the periphery.

There can surely be little dispute that this centre is an excellent layout, although it might have been even better if East Gate road had been a pedestrian way, and not a through traffic way, so that one could walk from Broad Walk into the Market Square without being bothered by vehicular traffic. The centre would then have rivalled Stevenage as the complete pedestrian precinct, while being more spacious.

By the end of 1962 most of the buildings in the Market Square and Broad Walk and some in the Civic Square had been completed. The buildings are like the plan, square and formal and a little cold and very much of the nineteen-fifties with large areas of curtain walling. Some observers have wondered whether a little more variety in the architecture, a little less cold formality and a touch of gaiety might not have been more appealing to the people of the town, but when the trees are bigger the general effect will almost certainly be much improved.

THE INDUSTRIAL AREAS

As previously indicated there are two industrial areas, one to the north-east called Temple Fields between the railway on the north and Mark Hall North and one to the west of Hare Street called the Pinacles. The former is much the larger and by the end of 1962 was well

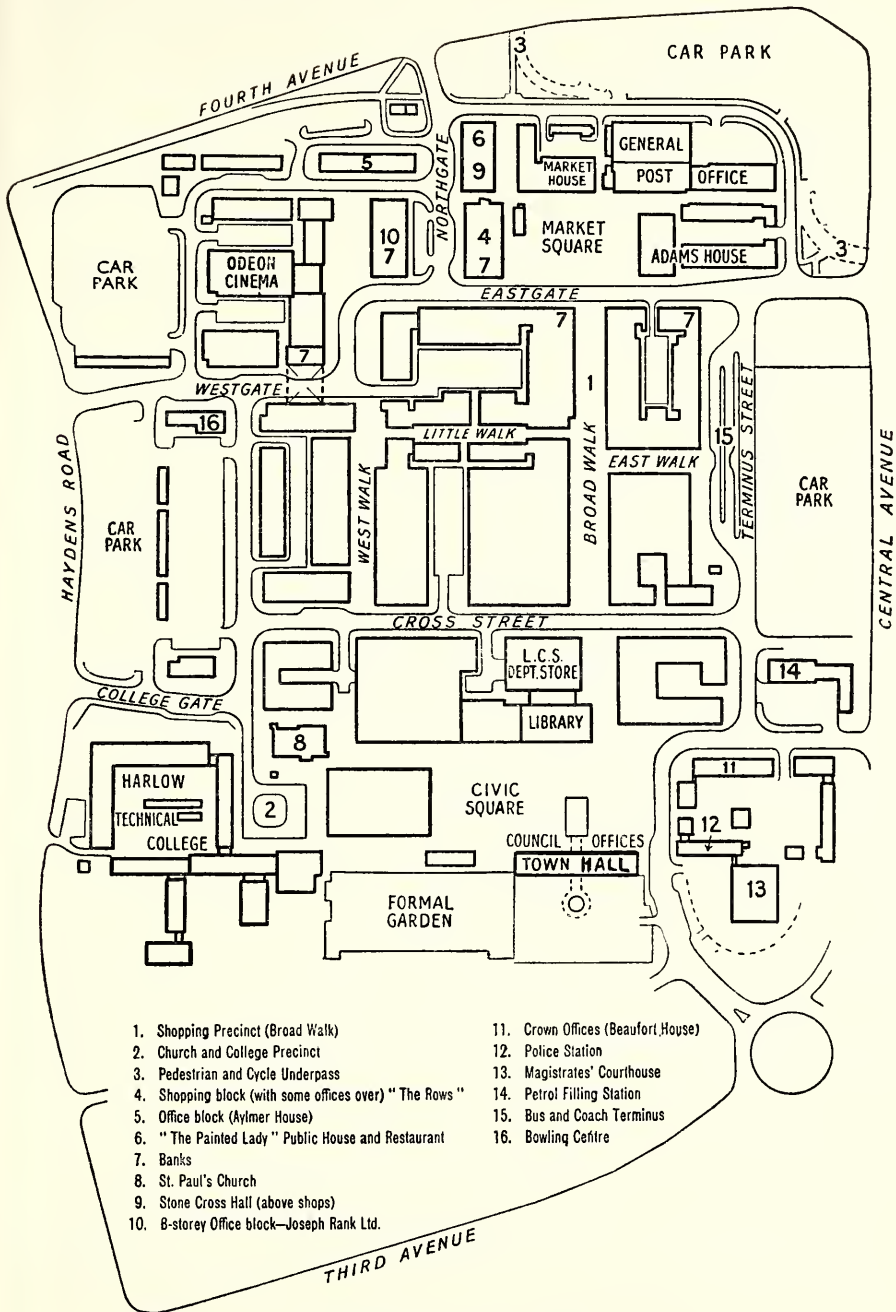


FIG. 25—Harlow Town Centre.

over half completed, while a few factories had been built in the Pinnacles. Edinburgh Way which runs parallel with the railway is a wide grass-verged road forming the spine of the Temple Fields industrial area with factories to the north and south. To the south of Edinburgh Way the general plan consists of a series of rectangular island sites with several factories facing on to the roads and the back land left open for possible expansion. On the north the factories are arranged along Edinburgh Way and round a series of culs-de-sac. In the middle of the industrial area, set back a little from Edinburgh Way, is a row of shops with a clinic nearby as part of the Harlow health service.

Most of the factory buildings are one-storey or two-storey structures and the designs generally are not of marked architectural distinction. The whole effect of Temple Fields is a little stark and monotonous; the prospect is lacking in trees; and this industrial area is generally less pleasing than those of many of the other new towns. The factories have not the variety and architectural interest of those at Stevenage or Hemel Hempstead nor the fine general effect of those at Crawley or Bracknell.

One good social and economic quality of the industrial estate, however, is that a considerable diversification of industry is represented in the 86 or more firms that have come there. The industries represented include plastics, radio and television cabinets, engineering tools, electrical equipment and devices, glass, clothing, photographic apparatus, printing, corsets, various forms of light engineering, and five major research establishments.

SOCIAL ASPECT

Most of the inhabitants of Harlow have migrated from various parts of London, largely with the firms of which they are employees. When such firms decided to go to Harlow, often with the purpose of expansion, the question was usually put to the employees whether they would like to go too. Generally a majority agreed to go, partly because they wanted to keep their jobs in the firms, but also because they could get houses, (for which many had been waiting), and a change from crowded to more spacious living conditions. From the evidence it has been possible to collect, few who went to Harlow have regretted their decisions, and only a very few, a little over 5 per cent per annum, leave the town. These go to other parts of Great Britain, to other new towns, and overseas, and a small proportion only return to London.

The general impression is that the people are happy. They take a pride in their homes, which are well kept and decorated, and the gardens are often a joy. The people like the effect of cleanness in the town, while most have nothing but admiration for the town centre. Of course there are critics and grumblers; they are an insignificant minority, but a minority that, being very vocal, obtains more than its share of publicity in some sections of the press.

Some of the social problems that are inevitably encountered in a new town have been considered in the chapter on Stevenage and many of

these apply equally to Harlow which enjoys a very vigorous social and cultural life. There are over four hundred societies, clubs and organisations of various kinds in the town. Interest in drama and music seems to be particularly strong. There are over twenty amateur dramatic societies, two of which have made continental tours in response to invitations. One day the town may have its theatre because the Harlow Theatre Guild has been active in urging that one should be built. In addition to the activities of the various music groups the Harlow Music Association has sponsored concerts by famous orchestras including the London Philharmonic, the London Symphony and the B.B.C. orchestras. There is also a ballet club and school. There are over fifty youth clubs and the facilities for sport include a regional centre and a central swimming pool.

The health service in Harlow deserves especial mention as it is one of the most notable in the country, and is probably in advance of that in any other of the new towns. Lord Taylor, M.D., writing in *Town and Country Planning* (January 1959) of this health service refers to 'the remarkable degree of co-operation achieved between local representatives of the three branches of the National Health Service', and he believes that in Harlow they 'are building a possible pattern for the future health services of Britain, up to, but excluding, in-patient hospital care'. Opportunity for experiment in the health service is made possible because Harlow, alone of the new towns, is without a pre-determined pattern of health services. Buildings for the purpose have been provided in the town centre, in the neighbourhood centres and sub-centres with one, as previously noted, in each industrial area. The premises have been provided from funds made available by the Nuffield Provincial Hospitals Trust, for whom the development corporation acted as agent. An aim in developing them has been to provide a pleasant, homely and 'non-clinic' atmosphere in which the patient could feel at home, an aim partly secured by furnishing the visiting rooms rather like a modern home, with accents on colour and interesting pictures.

One thing that seems to be widely appreciated in Harlow, which has some relation to health, is the opportunity of getting so quickly into very pleasant country, into the stretches between the neighbourhood groups and into the green belt beyond. That appreciation is one justification for the plan of the town.

Chapter XVI

NEWTON AYCLIFFE

IN 1940 a large Royal Ordnance factory was built at Aycliffe in South Durham to which the workpeople came from surrounding districts and nearby towns, principally Darlington, Middlesbrough, Stockton and Bishop Auckland. By the end of the war seventeen thousand persons were employed in the factory. After relinquishment of war purposes, the buildings were handed over to the North Eastern Trading Estates Ltd. (now the Industrial Estates Management Corporation for England), and by 1947 approximately fifty firms employing about 3,000 persons occupied these factories, which by 1957 had increased to over sixty firms employing about 4,000 persons of whom two thirds were male. A wide variety of industries are represented, including textiles, castings, sheet metal work, engineering products, office machinery, building materials, chemicals, paints and varnish, plastic materials and many others.

It is to provide housing accommodation for the people working in the Aycliffe Industrial Estate that the new town of Newton Aycliffe is being built. The site was designated on 19th April 1947 and it was agreed with local authorities in the area that the maximum population should not exceed 10,000. In 1957 this was increased to 20,000.

The designated area consists of 867 acres formerly within the urban district of Shildon and the rural districts of Darlington and Sedgefield but now all within the Darlington Rural district. It is about six miles north of Darlington and nine miles south of Durham. The site varies from gently undulating to flat land, mainly agricultural with a few farmhouses and small cottages, having a population, at the time of designation, of not more than 60.

THE OUTLINE PLAN

The outline plan was prepared by the Grenfell Baines group, but it has been continually modified as the work proceeded. The industrial area lies outside the designated site to the south of the railway that runs east-west from Stockton to Bishop Auckland, and the new town is situated immediately north of this line and west of the A 1 trunk road, which form the height and base of the triangular area of the town. The outline plan consists of six wards or neighbourhoods grouped round a town centre, with strips of open space to the east, joining the diagonal along the north-west boundary. Each ward is divided into three or more precincts. There are four ward centres, the two wards without them

NEWTON AYCLIFFE

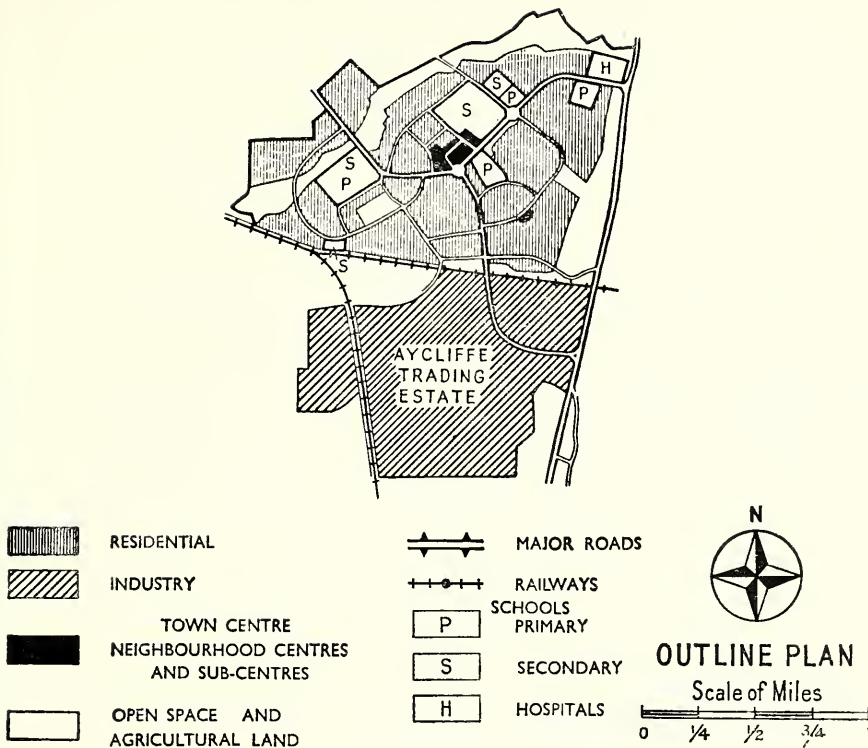


FIG. 26

both abutting the town centre. Four primary schools are included, one near the town centre and three on the outskirts, north, east and west. Three secondary modern schools and a grammar-technical school are provided on a campus near the town centre. The principal road system of the town takes the form of a loop from A 1 integrating the residential parts with the industrial estates and intersected by a ring road linking the ward centres with the town centre. The minor roads within wards mostly curve like the traditional English country lane. An important characteristic of the plan is a system of 'village greens', generally one for each precinct, round which the houses are grouped. The town centre is as nearly as possible in the geographical centre of the triangle.

A population of 10,000 in 867 acres represents a fairly low density, but in 1951 the plan was revised and it was proposed to house the 10,000 in a smaller area, but even then it meant a density of no more than 9.7 dwellings per acre. One of the reasons for this change was that it would reduce the costs per dwelling, while under this revised plan land was made available for an increase in the maximum population. This anticipation was realised in 1957 when as previously noted the maximum

population was raised to 20,000. It was regrettable that this larger size or even 25,000 was not adopted at the beginning, for a new town of 10,000 some distance from large towns is not adequate to support the amenities and recreational facilities that most people require. Such a change in the maximum size is in principle unsatisfactory, because it necessitated several adjustments in the course of building, but the corporation, judging by its annual reports, seemed always to be aware of the possibility of an increase and to make allowance for this in the stages of the plan.

BUILDING THE TOWN

Other than the restricting requirements of the local authorities as to the small size of Newton Aycliffe, there seems to have been little opposition to the town at the beginning, and fairly good progress was made with housing. By the end of 1953 about 1,250 houses had been completed, and then for the next few years between 300 and 400 houses were completed each year so that by the end of 1962 about 4,170 houses had been built and the original maximum population had been passed, the total then being 13,700. With the exception of 38 all the houses had been built by the development corporation.

The first parts of the town to be built were those to the south between the centre and the railway, known as A and B wards, which were completed by the end of 1954. A ward to the south-east consists of four precincts, and B to the south of the centre consists of three precincts. The building of C, D and E wards to the west and east had made considerable progress by the end of 1962 and some progress had been made with the town centre.

RESIDENTIAL AREAS AND HOUSING

In building the first two wards A and B the corporation provided a proportion of flats, 109 combined with 1,534 houses, but since the completion of these two wards they have not built any more flats. The annual report for 1952 states that 'as a result of experience gained in the letting of the first 400 dwellings in the town the corporation has found that there is as yet little demand for flats. It has, therefore, been decided not to build any further flats for the time being after those already being erected are completed.' The corporation was anxious to attract a certain number of the middle-income groups to the town and arranged to provide in 1952 about 10 per cent of the dwellings for them. The remaining 90 per cent for the lower-income groups were divided as 2·7 per cent of 1 bedroom houses, 48·6 per cent of 2 bedroom houses, 36·0 per cent of 3 bedroom and 2·7 per cent of 4 bedroom houses. By 1956 these proportions were modified to 2·5 per cent one-bedroom, 29 per cent two-bedroom, and 61 per cent three-bedroom, half of which were 4-person houses (1 double and 2 single bedrooms) and half 5-person houses (2 double and 1 single bedrooms). The houses are mostly in two-storey terraces in short blocks, three to six or eight but rarely longer, grouped

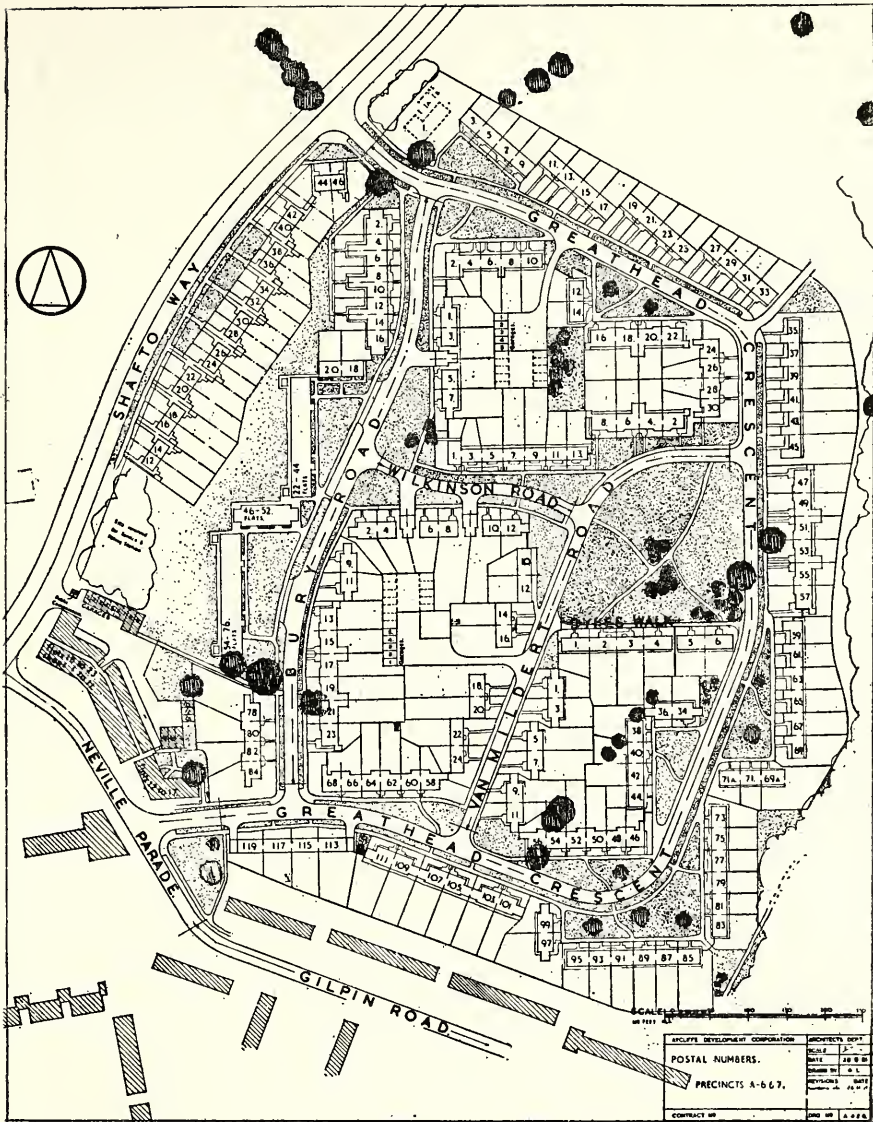


FIG. 27—Plan of Ward A at Newton Aycliffe. In addition to the 'village green' seen towards the east of the area, there are several small open spaces arranged irregularly in various parts in calculated relation to the housing groups so as to obtain interest and variety. The alternation of groups of houses and small open green spaces makes the layout attractive.

with considerable variety. The houses are built mainly of brick, with varying finishes of brick and rendering, while the roofs are generally low pitched with gabled ends which gives a pleasing restrained appearance.

In conformity with the village green idea which actuated the planning, and with the liberal allowance of space that a 10,000 population in 867 acres makes possible, the houses in wards A and B are grouped round generous green areas of varying shapes. Thus coming south-east

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

along Gilpin Road in A 1 precinct one passes a broad stretch of green on the right as the road turns south, then passing some houses abutting endwise on the road another equally extensive open space appears on the right, with a narrower but still generous stretch of green in front of a row of houses on the left. That is the kind of experience that is common in moving about A and B wards. Where the houses are not arranged round greens, they form several closes of varying proportions.

One particularly attractive green is the triangular shaped area in B 2 precinct bounded by Cumby Road and Lower Road. Along the former road to the south-east is an attractive row of patio houses, linked together by walls and garages, with lawns in front. Towards the point of the triangular green on the further side are trees and a shrubbery near a row of houses, which present a felicitous grouping.

Attractive as are these generous stretches of green plentifully spread in the residential areas it may be wondered whether they are not over-done, suggesting a too liberal use of land for the purpose. If they had been a little smaller the balance of space could have been used perhaps to give slightly larger gardens. With the population increased to 20,000 the wards to be built last will be at a somewhat higher density, and though the plan provides for a continuance of 'village greens' they will probably be smaller.

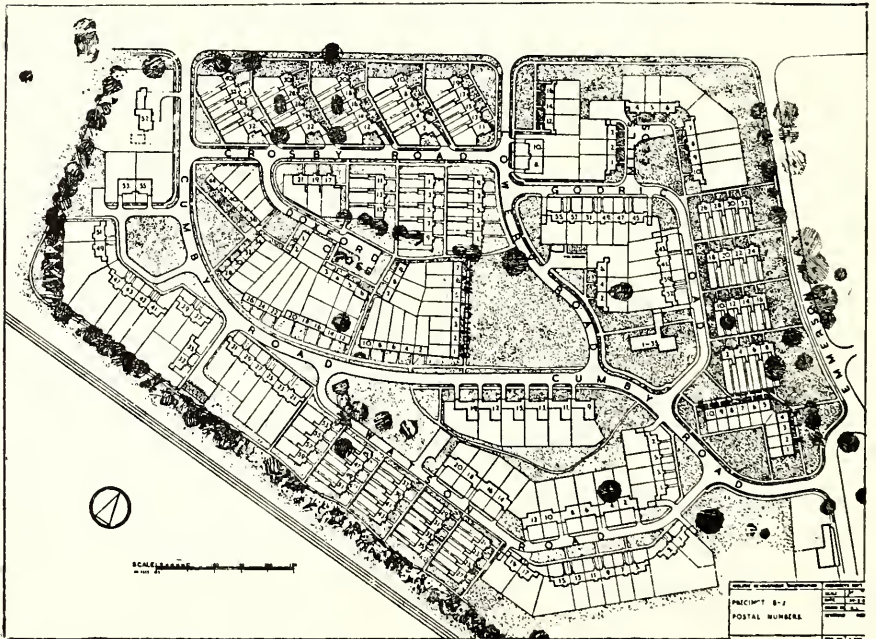


FIG. 28—Plan of one of the precincts in Ward B, a pleasing example of grouping houses in an irregular yet very effective manner round the 'village green' seen in the centre. The ground slopes to the east and where the green narrows to the north is a group of trees and shrubs, while in the south is an unusual row of patio houses.

WARD CENTRES

The shopping centres of A and B wards were completed by the end of 1955. Ward centre A provides eleven shops on a slightly curved alignment on one side of the road (Neville Parade). A Methodist church is opposite and a little further along the road on the same side as the church is 'The Oak Tree' public house, so that the centre follows a pattern familiar in the new towns. Ward B centre is smaller with seven shops on one side of the road (Simpasture Gate) with the 'Iron Horse' public house a little away on the other side of the road. Except that the shops are on one side of the road there is little in the nature of a precinct in either, such as might be obtained by being set back from the road with a broad footway of attractive shape like those found in many of the other new towns.

THE TOWN CENTRE

The town centre is in process of being built to the north-west of Central Avenue at the end where it terminates with a roundabout and connects with Stephenson Way. It is a long rectangular area with a spine road—Beveridge Way—that curves off the roundabout and becomes a central straight street between shops. At the north-east end it terminates at Dalton Way, on the further side of which is a group of health and community buildings, a school clinic and child welfare centre, a library, an old people's and a youth club. At the south-west end of Beveridge Way is a short pedestrian shopping precinct and a departmental store. A large car park and garages adjoin Central Avenue at the back of the shops. It does not seem to us a good layout; it would have been far better in so small a centre to have a complete pedestrian precinct, with motor vehicles kept on the periphery. This plan, however, is being radically altered, for in the 1962 report it is stated that the development corporation has agreed, in principle, to the town centre being re-designed to secure segregation of pedestrians and vehicular traffic in accordance with the need. 'The new design of the town centre provides for the closing of Beveridge Way to traffic and a diversion of Dalton Way to bring the present Over Sixty Club premises and the Boys' Club within the curtilage of the pedestrian precinct.'

SOME GENERAL REFLECTIONS

Newton Aycliffe has suffered in its planning and building from much too small a maximum population, and from the uncertainty whether it was to be ten or twenty thousand. But even with the latter figure now adopted, it seems inadequate for the provision of those amenities and facilities of civilised living that most people expect. Anything under thirty thousand makes the social problems of providing entertainment and cultural facilities more difficult. Often in the new towns the complaint arises that there are not the social amenities of other older places, and these can only be provided on a reasonable scale if there is the

population to support them. Thus the social difficulties of this kind are rather being invited when the population is made initially as low as ten thousand. Whether amateur and voluntary activities will compensate for conventional facilities remains to be seen. Still, in Newton Aycliffe there is a pleasing sense of space in the residential areas, families have their two-storey houses with gardens, and the spacious village greens, which are often visually delightful.

Chapter XVII

EAST KILBRIDE

GLASGOW and the lower valley of the Clyde comprise one of those large congested areas which exhibit all the reasons for dispersal, and it was no doubt with this in mind that the Secretary of State for Scotland appointed the Clyde Valley Planning Advisory Committee in 1943 to advise on and prepare a plan for the more satisfactory development of the region. As a result the Clyde Valley Plan was published in 1946, and it contained proposals for enlarging certain small towns and building new ones, with the reservation of open country around and between them. One of the sites proposed for a new town was at East Kilbride, and it was provisionally designated by the Secretary of State for Scotland in the autumn of 1946, and after a public enquiry the designation was confirmed on 6th May 1947.

The designated area consists of about 10,500 acres, of which 2,500 acres will be used for the new town and the remainder will form the green belt, and thus East Kilbride and Glenrothes have the distinction of being the only new towns where the green belts are controlled by the development corporations. Not quite in the centre of the area, but a little towards the south-east, is the old village of East Kilbride with about 2,500 population, situated about 8 miles south-east of the centre of Glasgow. This has been criticised as being much too near, but between Glasgow and East Kilbride is a range of hills 700 feet high, and much the broader part of the green belt of East Kilbride is on the north side where it is about 2 miles wide, while there is a further stretch of open country beyond this. Consequently, there is reason to believe that this stretch of open country, about three miles wide, will be preserved between Glasgow and the New Town. The topography is such as to create a feeling of complete detachment from the crowded city.

The site of the new town is hilly, a characteristic it shares with those of Glenrothes and Cumbernauld, and this has meant a fair amount of site preparation, levelling and earth moving. The undulating landscape is attractive with pleasant views in many directions.

OUTLINE PLAN

East Kilbride was originally designed for a maximum population of 45,000, later raised to 50,000, and ultimately, in 1960, to 70,000. When Lord Craigton, Minister of State, visited the town in June 1960, he said that the target population should now be expressed as 70,000, a figure

EAST KILBRIDE

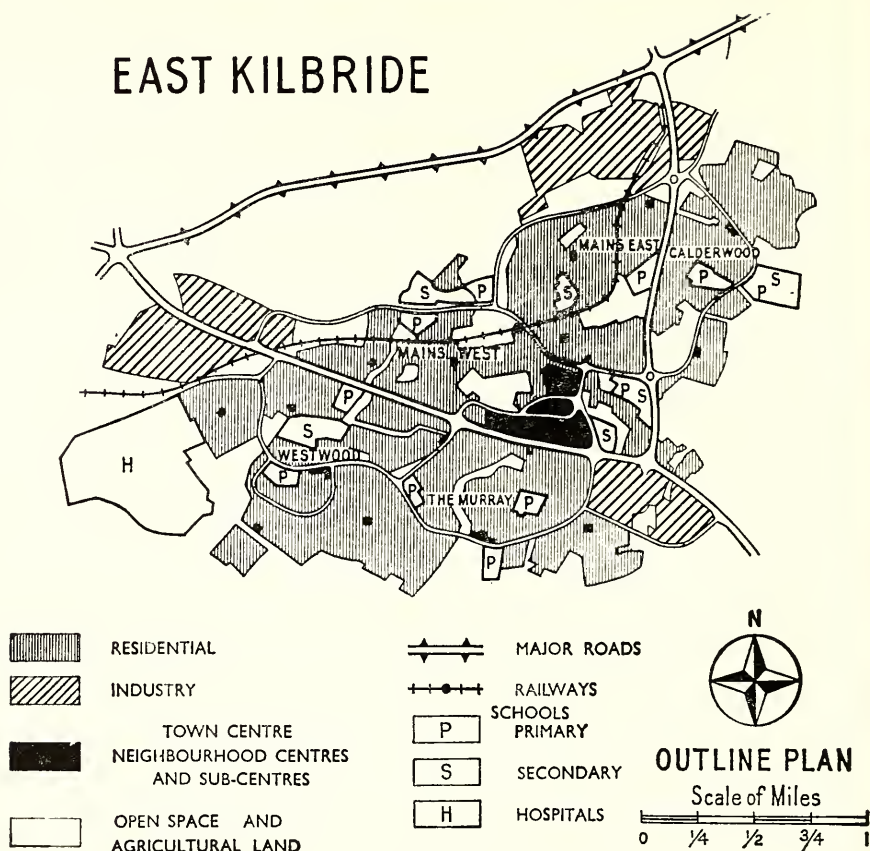


FIG. 29

inclusive of the natural increase of the population which will follow the initial build-up to about 55,000 by planned immigration.

The town is divided into four neighbourhoods. Mains, which includes the existing village, occupies a triangular site formed by the two main roads through the town, one to the east running north-south and one to the south running approximately west-north-west to east-south-east. The Mains neighbourhood is planned for a population of about 11,500. To the east of the north-south road is the neighbourhood of Calderwood with a population of 10,500, and to the south of the other main road at the east end is The Murray (12,500) and at the west end Westwood (15,500). Each neighbourhood has a principal shopping centre and several smaller groups of pantry shops: Mains having four; Calderwood, one; The Murray, two, and Westwood, four. There are eleven primary schools evenly distributed throughout the town, and six secondary schools. The town extends about three miles from east to west, and about 2 miles from north to south at its east side, tapering to only about 1 mile at its west end. Considering this somewhat awkward shape the town centre is very well situated, approximately in the geographical

centre, so that no part of any residential area is more than $1\frac{1}{2}$ miles away. There are three industrial areas, Nerston to the north-east, College Minton at the west end, and Birmehill to the south-east. At the west-end a large hospital was already in existence.

It is stated in the 1961 report that 'further areas will be necessary to accommodate the target population of 70,000. It has yet to be resolved whether to develop the whole of East Calderwood, including the steep slopes, or whether to make use of some of the flatter land to the north of the town which has the additional advantage of being nearer to the town centre.'

BUILDING THE TOWN

House building started in 1948 in small areas close to the old village, but it was not until 1950 that large contracts began in The Murray immediately south of the town centre. Later, sites in The Mains were started, and by 1954 most of the northern part of The Murray, most of the residential district immediately adjacent to the old village in The Mains, an area in the eastern part of Westwood, and a small area west of Calderwood were completed. It will be seen, therefore, that the policy was to spread the building widely around the town centre and not to concentrate only on one neighbourhood at a time. This probably helped the fast rate of building that was achieved which has averaged since 1953 nearly one thousand houses a year, the approximate figures for each year being 1,100 in 1954, 1,050 in 1955, 760 in 1956, 670 in 1957, 950 in 1958, 1,050 in 1959, 860 in 1960, 450 in 1961, and 740 in 1962 when a total of approximately 9,335 had been built, all but 90 by the corporation. The fall in 1956 and 1957 was due to the national restrictions on capital expenditure, weather conditions and changes in policy at that time. By 1962 most of The Mains and The Murray, a good proportion of the north-western part of Calderwood, and the north-eastern part of Westwood had been completed, so that the chief remaining parts to be built are the west and southern sections of Westwood and the south-eastern part of Calderwood.

Progress with the neighbourhood and shopping centres has kept in step with the housing. The old village street has become the neighbourhood centre of The Mains and a number of improvements have been made there, and, in addition, four small shopping groups have been completed in The Mains. The chief neighbourhood centres of both The Murray and Calderwood, and one small shopping group each in The Murray, Calderwood and Westwood, have been completed.

Progress with the town centre on the contrary has not been comparable.¹ By 1959 only two blocks of shops at the north-eastern corner, an hotel, post office and telephone exchange had been built. This provided only a very small proportion of the shops planned for the centre, and until 1962 most people living in East Kilbride still had to go to Glasgow for the shops supplying other than day to day needs.

¹This is partly due to a reconsideration of the town centre plan. See Development Corporation report for 1960.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

Industry, on the other hand, has more than kept pace with housing and by 1962 fifty-five undertakings in the three industrial areas were established giving employment to about 10,000 persons, which is satisfactory for a town which by that time had reached a population of about 35,000, for it must be remembered that a considerable number would be in commercial employment. As industrial building is proceeding at a satisfactory rate the question may arise whether there may not be too heavy a balance of industry. Considering the proximity of East Kilbride to Glasgow there was much to be said for a maximum population not exceeding 50,000.

HOUSING AND RESIDENTIAL AREAS

The development corporation concentrated for the most part on the medium-sized house in the early years of development because the majority coming to the town were young married couples with small children. Later, with an increasing population of teenagers and middle-aged persons, there may be a greater need for both larger and smaller houses. The proportions of dwellings of different sizes built up to 1960 were 42 per cent of 4-apartment (3-bedroom), 42 per cent of 3-apartment (2-bedroom), 10 per cent of 1 and 2-apartments, and 6 per cent of 5 (3 or 4-bedroom) and 6 (4-bedroom) apartments. A small proportion of houses, a little over a hundred, have been built by the

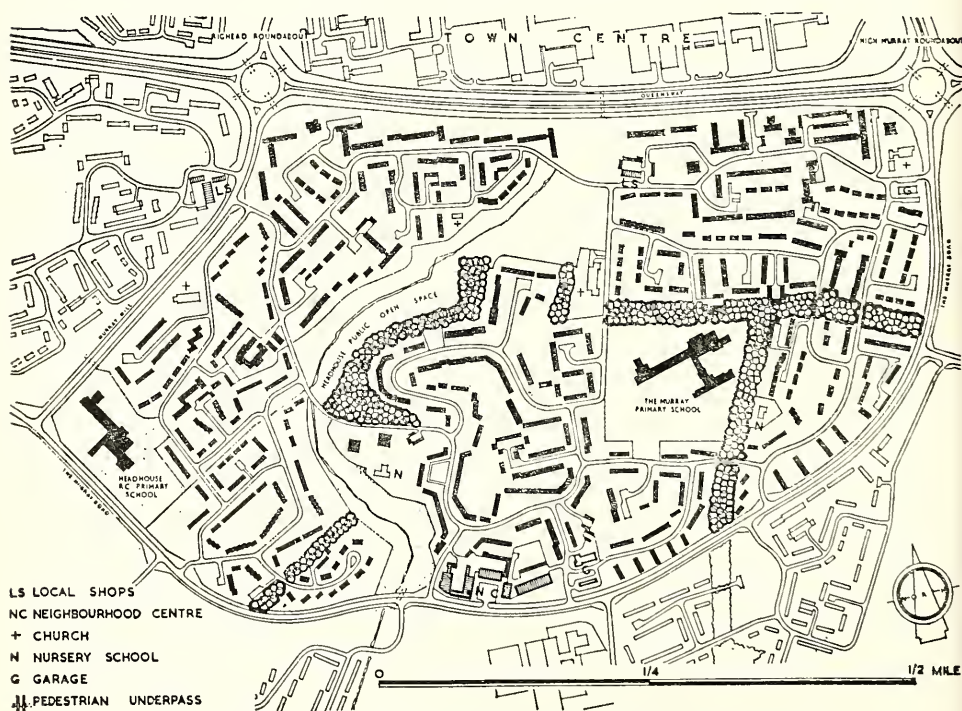


FIG. 30—East Kilbride—northern part of The Murray neighbourhood immediately south of the town centre. The Murray centre is on the south side near the ring road.



(a) Row of shops in the partly built town centre.



(b) Shopping centre for the Westwood neighbourhood.

(c) Garden view of one of the junior schools of the town.



Plate 29.
East
Kilbride.



(a & b) Two views of flats and houses in the residential area adjacent to old East Kilbride village. Above shows the attractively grouped houses, and below shows the block of flats, which received a Saltire award in 1956. Both views show the buildings in relation to extensive lawns and footways.



Plate 30.
East Kilbride.

(c) Quebec Green. Semi-detached housing running transversely from the road, with extensive area of green.



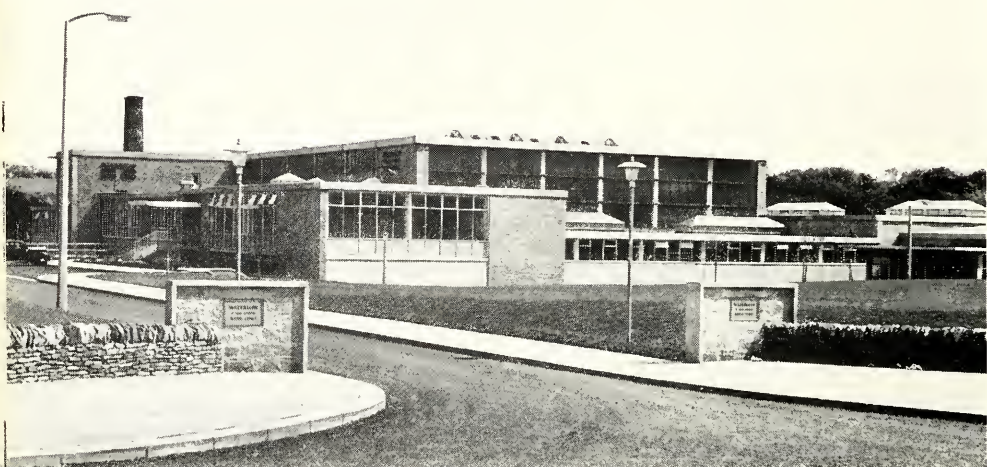


(a) Terrace housing. The Mains neighbourhood, designed with echelon layout on a sloping site, an arrangement which gives interest and avoids monotony.

(b) Group of houses facing on to a pedestrian way. Note the many old trees.

(c) A novel children's play area in The Murray neighbourhood.





(a) Office block of the factory of Rolls Royce Ltd., in the Nerston industrial area.

(b) Factory of Waterlow & Sons Ltd., College Minton industrial estate.

(c) One storey old persons dwellings.



(a) Easington Way, a principal road bordered by sloping lawns, that runs approximately north from the town centre between north-eastern and north-western neighbourhoods. The landscaping of this road is very effective.



(b) View of the sloping lawn bordering Easington Way with semi-detached houses.

(c) Neighbourhood shopping centre. Architect: W. J. Scott.





(a) Pedestrian way between houses.

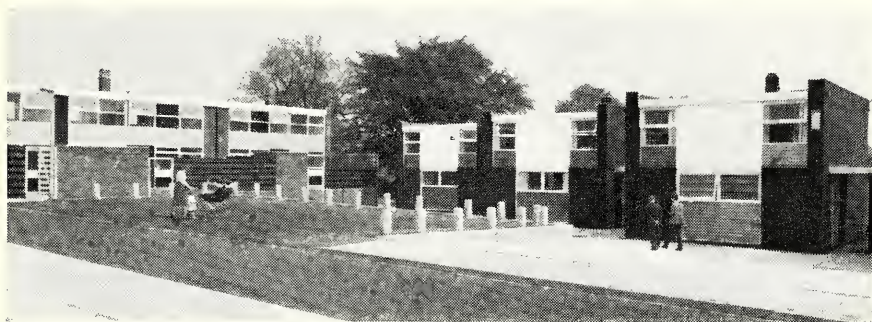


(b) View of square enclosed garden in South West neighbourhood. (see Plate 35).

(c) Another view of houses grouped on either side of a pedestrian way.

Plate 34. Peterlee.



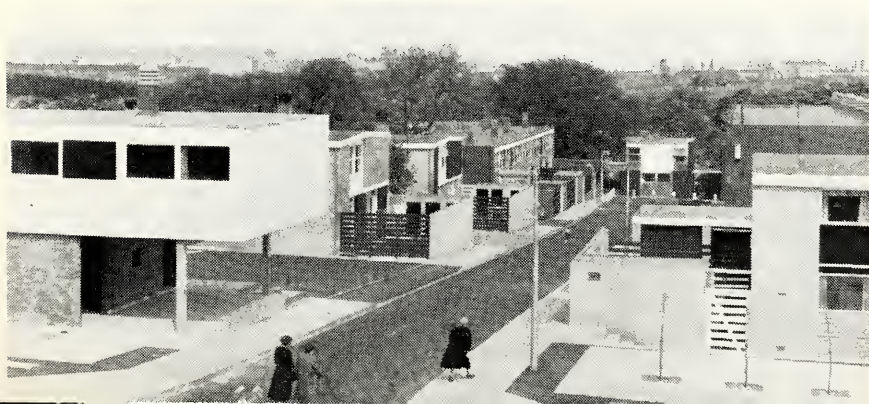


(a) South West neighbourhood designed as an experiment by Peter Daniel and Frank Dixon, two architects on the staff of the development corporation, in collaboration with the painter, Victor Pasmore. View of a group of houses with a children's paddling pool. The other illustrations on this page are further views of the neighbourhood.

(b) Bollards form a prominent item of furniture serving to separate pedestrian and vehicular areas.

Plate 35.
Peterlee.

(c) One of the principal streets of the South West neighbourhood.





(a) A group of two storey houses with a three storey block in the distance in the South West neighbourhood.



(b) A group with Methodist Church near the town centre.

Plate 36.
Peterlee.

(c) Houses at the top of the sloping lawn bordering Easington Way. Architect: W. J. Scott.



corporation for the higher income groups, thirty-four houses have been built by private enterprise for sale, while sites have been made available for individually designed private houses.

A good proportion, some 50 per cent, of the dwellings are houses in terrace blocks, about 14 per cent are detached and semi-detached houses, while 36 per cent have been built as flats, all but 4 per cent, in 3-storey and 4-storey blocks. This high proportion of flats hardly accords with the comments made by Sir Patrick Dollan, the Chairman of the Development Corporation up to 1959, in the Foreword to the corporation's official brochure of 1957 where he says 'at least 95 per cent of the residents have intimated that they prefer houses with gardens to tenement and flatted homes.' Why in face of this the development corporation have built 36 per cent flats is difficult to understand. The attitude of several people is that if they have to live in flats they may as well stay in Glasgow in closer proximity to the life and amusements of a big city. It may be that in Scotland it is just a little difficult to shake off the tradition of flat building. An explanation given to the authors by the general manager of the development corporation is that because of the uneconomic rents 'there is a heavy deficit on all housing' and that they 'build flats considerably cheaper than houses and in consequence the deficit on flats is very much less', while 'to maintain a density of about 15 dwellings to the acre it is necessary to build flats. The hilly nature of the sites make it impossible to get 15 houses to the acre'. That it is cheaper to build flats is surely contrary to experience in most other parts of Great Britain where flats above three stories are generally more expensive to erect than two-storey houses. Further comments on flats and houses are made in the chapter on Glenrothes.

The layout of the residential areas is very much on the irregular lines of those of most of the new towns, but in East Kilbride this informality seems more pronounced because of the generally hilly character of the site. The areas are divided by curved roads which form islands and into these culs-de-sac, very varied in character, are introduced. Houses are, for the most part, in terraces. Sometimes semi-detached blocks are arranged in echelon fashion. Rarely do the houses align the roads in a parallel manner; generally the spaces between the house fronts and the road vary; a favourite device is to form a triangular plot of green, the road forming the hypotenuse of the triangle. Occasionally there is a more formal arrangement with terrace or semi-detached houses on two sides of a long rectangle with a grass patch and pedestrian ways in the centre. There is unfortunately a certain dullness in some of the housing units, particularly those which are mainly faced with brown or buff bricks, and this is rather accentuated in the longer terrace blocks. Efforts have been made in a few streets to relieve the monotony with various coloured renderings. Some of the later houses, however, are more attractive in appearance, this being achieved by variety of wall patterns, such as coloured rendering and brickwork and the introduction of painted timber boarding and hanging tiles. One row in Stephenson

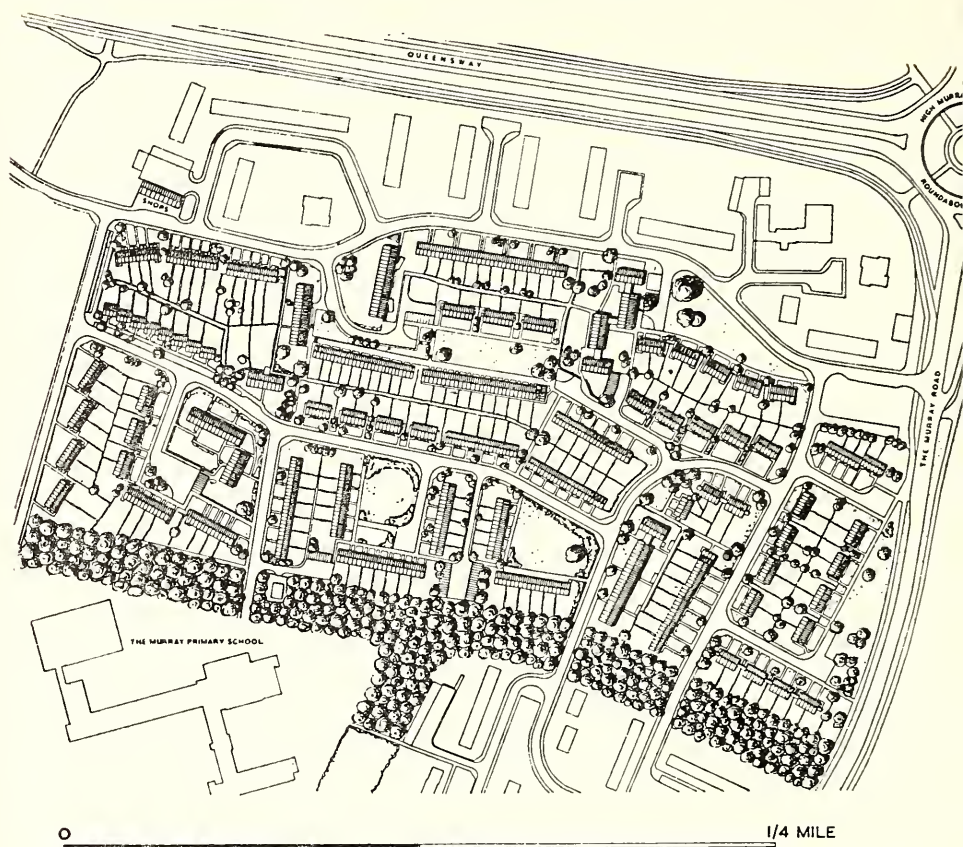


FIG. 31—East Kilbride—a large scale plan of the north eastern corner of The Murray neighbourhood shown in Fig. 30. It is an interesting example of cul-de-sac planning.

Terrace in The Murray is a series of detached houses with gable ends to the front, linked with each other by a bridge which provides space for a room. Of the flats some of the best are the three-storey blocks in Westwood which are pleasantly staggered while having recessed balconies; far better than the projecting exposed balconies of the three-storey blocks in Park Terrace in West Mains. Houses for the higher-income groups are also of interesting design. Numerous trees have been planted to supplement the few that have been preserved wherever possible, and when the former have grown it will greatly improve the general appearance and give a more varied character to the scene.

NEIGHBOURHOOD CENTRES AND SUB-CENTRES

In the neighbourhood shopping centres the pattern is similar to those in many of the other new towns. Shops are arranged either on three sides of a square adjoining the road as in The Murray, or as a straight row of a few shops, or on two sides of a triangle as in Westwood, where a stretch of grass attractively occupies the triangle. In The Murray

maisonettes over the shops in three-storey structures give height and an added sense of enclosure which is agreeable. Perhaps this centre would have been even more successful if there had been a larger pedestrian area in the square, which would have diverted goods vehicles to their rightful place at the backs of the shops where access is provided.

TOWN CENTRE

As previously noted, not a great deal of progress had been made with the town centre in the first ten years; only two blocks of shops, a hotel and a combined post office and telephone exchange had been completed. The delay was partly occasioned by changes of plan. As first planned the centre had a principal street—Princes Street—running through its middle from east to west with a large car park at the western end, and pedestrian shopping ways running off north and south. In the revised plan, adopted in 1960, a much larger area has been allocated to a pedestrian precinct by the conversion of the eastern end of Princes Street. The development corporation was prompted to make this change, which is a decided improvement, by the success of pedestrian shopping centres in some of the new towns in England and in some redeveloped city centres.

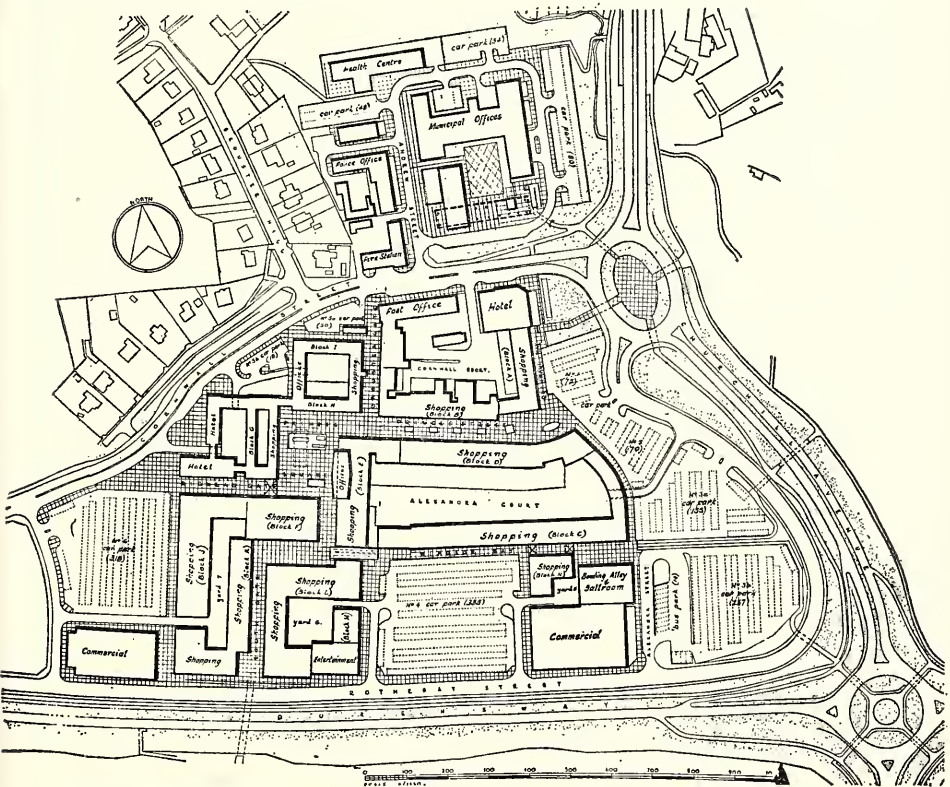


FIG. 32—East Kilbride Town Centre. This plan is the result of changes made in 1961 so that the shopping area is now largely a pedestrian precinct.

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

The whole centre is surrounded by a ring road off which are several car parks, and is designed to provide, in addition to shops, an assembly hall, library, health centre, a cinema, and municipal and other offices.

INDUSTRIAL AREAS

Engineering industries predominate in East Kilbride. They occupy the Nerston site in the north-east of the town, while the College Milton site of comparable size at the western extremity is partly so occupied. Some of the factories at Nerston are of considerable size such as that of Rolls Royce Ltd., making aero-engines, Sunbeam Electric Ltd., electrical engineering, and Mavor & Coulson, manufacturing mining machinery. It is a well planned industrial area with some buildings of distinctive appearance, such as the long administrative block of the Rolls Royce factory, with its long bands of fenestration punctuated by vertical shafts, facing the spine road.

Birmehill, the south-east industrial area, is occupied, so far exclusively, by the National Engineering Laboratory of the Department of Scientific and Industrial Research, a group of several rectangular blocks, with flat roofs, pleasantly grouped on a spacious site, and looking exceedingly well in the landscape. Later this group will be joined by buildings for the Scottish branches of the Building, Fuel and Road Research Stations of the D.S.I.R. Among the larger factories in the College Milton estate are those of Waterlow & Sons, the printers—an attractive group of buildings—the Cincinnati Shaper Co. Ltd., manufacturers of machine tools, and J. H. Carruthers Ltd., crane makers. Other factories are those of John Macdonald & Co. (Pneumatic Tools) Ltd., Holyrood Knitwear Ltd., and Cooper & Co's Stores Ltd. Among firms expected to move from Glasgow in 1961-62 were Lewis Berger (Scotland) Ltd., the paint firm, and Schweppes Ltd., the mineral water manufacturers.

The policy of the development corporation in seeking new tenants is 'to prefer industrial enterprises which (a) are mainly engaged in manufacturing, which (b) offer employment to skilled male workers and which (c) afford apprenticeship opportunities', because 'it is these industries which are likely to provide the high density of employment in terms of factory space and the type of occupation required if a proper balance of industry is to be created' (1961 Report). It is this last provision that is especially important if employment in the town is to be kept reasonably stable in comparison with the rest of the country. It is doubtful if the provisions enumerated are adequate for this purpose, which at the stage reached by the end of 1962 can only be secured by a selection of industries as different as possible from engineering. There are a few food and clothing firms, but they are a very small proportion of the whole, and it would be safer if that proportion were much bigger.

SOCIAL ASPECT

The provision of accommodation for cultural and recreational activities has been very slow. Although there have been for some years over

sixty social, cultural and recreational organisations, they have not enjoyed adequate facilities, and they have had to depend largely on church and school halls for accommodation. This has not been due to any fault of the development corporation which has done its utmost to secure such accommodation by various means within its limited powers.

In its report for 1960 the corporation refers to its attempts to ensure progress in the provision of community buildings in the new town, and also to the Government's offer to provide one-third of the cost. Little had then been done, but confident hopes were expressed that something definite would materialise. The provision of public amusements has also lagged; it has not been possible so far to interest the trade in providing a cinema. The district council has, however, sponsored cinema shows in the public hall.

Things have, however, begun to improve. By the end of 1960 Thomson Recreational Enterprises Ltd. had provided the Olympia Bowl and Ballroom, consisting of 16 lanes for the Canadian game of 5-pin bowls on the ground floor and on the first floor a ballroom for 1,000 dancers. Also in its report for 1961, the development corporation was able to announce that the Fifth District Council of the County of Lanark has decided to provide community halls in each of the neighbourhoods. The first to be started was that in The Murray shopping centre. A committee of residents was also formed to find ways and means of providing community premises in the town centre. It seems, therefore, that the many local organisations can look forward to a more comfortable future.

An existing building which gives a note of historical interest to East Kilbride is Hunter House at Long Calderwood, the home of William and John Hunter, the famous physicians and surgeons of the eighteenth century. The corporation has restored the house as a memorial to these two distinguished men, and the property has been conveyed to a trust which will maintain it as a memorial, a museum and place of pilgrimage.

In conclusion it should be observed that East Kilbride is fulfilling its function well as an overspill town for Glasgow. The majority of the immigrants and much of the industry are from that city. Up to March 1961 the percentage of immigrants from Glasgow was 56%, with 35% from Lanarkshire. The last year showed an increased proportion from Glasgow of 68% with 24% from Lanarkshire.

Chapter XVIII

PETERLEE

THE proposal for a new town in the mining area of east Durham was originally made by the Easington Rural District Council with the purpose of housing a proportion of the scattered population, amounting to some 82,000, of the Easington district. The proposal was adopted by the Minister of Town and Country Planning who stated in the Explanatory Memorandum to the Draft Easington New Town (Designation) Order of 1947 that 'it seemed clear that the district did have a special claim in that it is situated on the richest part of the Durham coalfield and must in any case receive a high priority in housing, and also that it offered an outstanding opportunity for breaking with the unhappy tradition that miners and their families should be obliged to live in ugly, overcrowded villages clustered around the pit-heads, out of contact with people in other walks of life, and even for the most part with workers in other industries. Unless an early start were made with the development of an entirely new settlement in keeping with present day ideas there would be a serious danger of a resumption of emigration away from the district altogether—one of the most unsatisfactory features of the economic and social experience of the area before the war.'

The new town was designated on 10th March 1948, and is planned for a maximum population of 30,000. The site of 2,350 acres is situated about 10 miles due east of the city of Durham, a little south of the village of Easington, while the village of Harden lies just beyond the north-east border. A tongue of the designated area stretches eastward to the sea. The ground is hilly in all parts with some steep valleys of considerable beauty to the south.

It has been named Peterlee after one of the most famous of Durham miners' leaders—Peter Lee, who was secretary of the Durham Miners and later president of the Miners' Federation of Great Britain. He was also a Chairman of the Durham County Council. He died in 1935 and was buried at Wheatley Hill just outside the designated area.

OUTLINE PLAN

The site of the new town is over mines containing some thirty million tons of coal. Mining continues at the same time as the new town is being built. It was, therefore, necessary to prepare two co-ordinated plans, one for the coal mining and one for the new town. This made the plan

PETERLEE

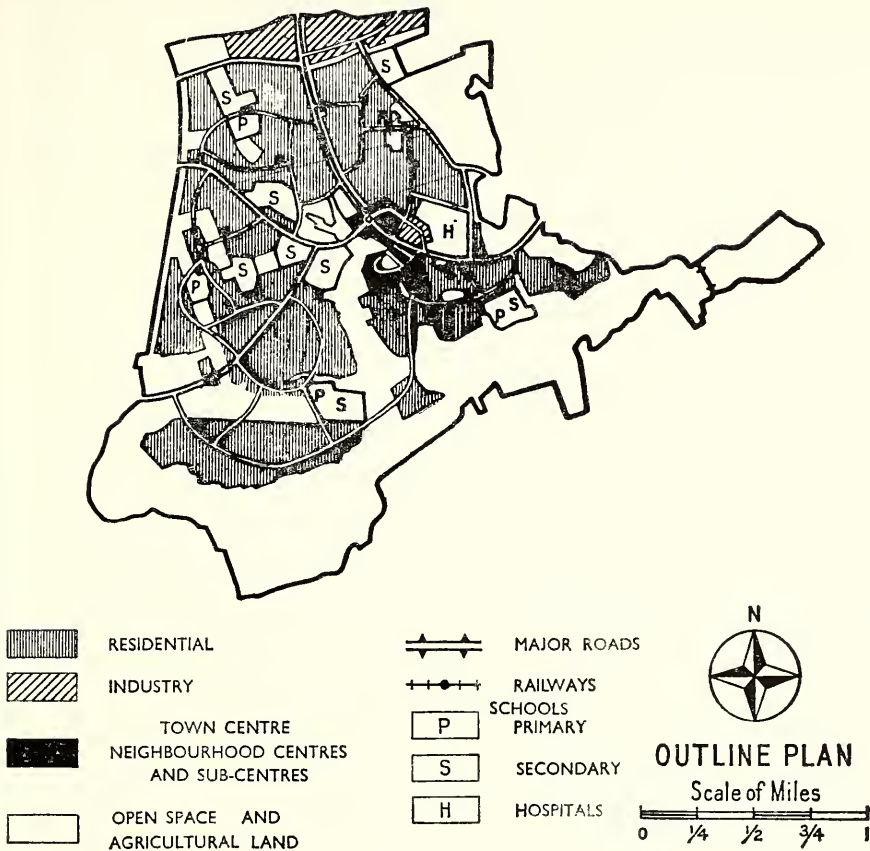


FIG. 33

one of the most difficult to prepare, while the necessity of securing co-ordination with the National Coal Board caused delay.

Some useful preparations for a plan had been made by C. W. Clarke, the Surveyor to the Easington Rural District Council, whose enthusiasm had contributed much to furthering the idea of a new town.

An advisory committee which preceded the development corporation by a few months early in 1948, appointed Berthold Lubetkin as architect-planner who, it was hoped, would 'not only plan the town, but who would also build it'. On the instructions of the Minister an outline for a master plan was to be prepared 'on the purely theoretical assumption that the problem of coal did not exist', a kind of ideal plan from which realistic plans could be made. This ideal plan was presented to both the Minister and corporation in November 1948. Later three alternative apparently realistic outline plans were produced from which the corporation selected one. In March 1950 Berthold Lubetkin resigned and was succeeded by Grenfell Baines and Hargreaves as

planning consultants. They prepared a plan which was published in September 1952; some further revisions were made and the whole scheme was submitted to the Ministry in December of that year. Agreements had been reached with the Coal Board.

Owing to the mining and the risks of subsidence and to the natural features of the site only a part of it, some 1,060 acres of the total of 2,350 acres, is available for building. Along the south of the area is Castle Eden Dene, a wooded valley varying from 600 feet to 1,250 feet wide and up to 150 feet deep. This is joined by Blunts Dene which starts as a small valley in the centre of the town and broadens and deepens southwards, and is about 600 feet wide and 150 feet deep at the point where it joins Castle Eden Dene. These Denes account for about 540 acres. Of the several strips of land which have had to be avoided owing to subsidence, one strip runs east-west in the south-west corner of the site, another runs north from it on the west side and joins strips forming a rectangle west of the town centre, while another runs northward from this. Parts of the area to the north-east where it adjoins the village of Harden will not be available because they are used for games and allotments, part is very steep, part is occupied by the ancient Yoden village of some historical interest, while the ground is not geologically satisfactory for building.

The plan consists of residential areas with populations of between 5,000 and 7,500, each sub-divided into two or three units. This plan seems to fall naturally into five or six neighbourhoods: the south-east, north-east, north-west, west, and south-west. The last mentioned being divided by an east-west subsidence strip could be regarded as two. Between each of the five main neighbourhoods are main town roads which all connect with the town centre, almost the geographical centre, and no more than a mile from houses on the outskirts. Each neighbourhood has infant, junior and secondary schools. The shopping centres are well distributed, two being provided in each of the neighbourhoods with the exception of the south-east where, because of its proximity to the town centre, one is adequate. An industrial area of about 80 acres, mainly for light industry to provide alternative employment to coal mining, and to absorb a proportion of female labour, is sited along the northern boundary, while an area of service industry is placed in the town centre.

BUILDING THE TOWN

A start with building was made in 1950, and it was aimed to build about 500 houses a year, an aim that was achieved in 1952. Thereafter the number built was generally a little short of that—about 450 in 1953, 380 in 1954, 525 in 1955, 360 in 1956, then a further drop in 1957, as in most other new towns, owing to credit restrictions, the number being a little less than 200. Some recovery was made to 360 in 1958, about 220 were built in 1959, 330 in 1960, 360 in 1961 and 225 in 1962 so that by the end of that year 4,206 houses had been built, thus providing

for a population of about fourteen thousand. On the basis of the hoped-for 500 a year a population of 25,000 could have been achieved by 1965. To make up the leeway would mean increasing the rate to nearly 700 a year.

Except for a group of 106 dwellings at Thorntree Gill in the eastern extremity of the town the first developments have taken place in the north-eastern and north-western neighbourhoods. The schools and the shopping centres, two in each, have been completed. One row of shops had been provided in the town centre by the middle of 1959 but generally progress here was slow, and it is doubtful whether it was keeping pace with the development and needs of the rest of the town. The first large section of the technical college immediately to the west of the town centre has been built, and the second phase will be completed a little later. The parish church of St. Cuthbert to the south of the town centre was dedicated at the end of 1957, and a little later the Peter Lee Memorial Methodist Church and group of buildings a little to the west were opened.

The development of the industrial zone was a little slow, some difficulty apparently being experienced in the early years, in attracting industry. First to be built were two large factories, one for Jeremiah Ambler (Peterlee) Ltd., combers and spinners of mohair and fine worsted yarns, and the other for Alexandre Ltd., clothing manufacturers, which together employ about 1,100 persons. In spite of the slow start, however, the corporation was confident, as stated in its report for 1958, that 'from the interest which has been shown during the recent period that additional industry will be established in the near future'. This is slowly being realised. By the end of 1959 a factory was completed for Waage Wood Wool Ltd., manufacturers of wood wool and joinery. Other factories were built for the Peterlee Joinery Co. Ltd. (a subsidiary of Waage Wood Wool Ltd.) and for Tudor Food Products, both of which were completed in 1960. Altogether by 1962 these factories were providing employment for nearly 2,000 persons.

HOUSING AND RESIDENTIAL AREAS

The early housing was in accordance with the standards proposed in the Dudley Report, but in 1952 some reduction was secured in the circulation space by tight planning in accordance with a regrettable national policy, and what was known as the 'Q' type was employed at Peterlee for a considerable number of houses in the north-eastern and north-western neighbourhoods. It was the policy of the corporation to build mainly two-bedroom and three-bedroom houses in the proportion of 45 and 34 per cent in terrace blocks of four houses, or as semi-detached houses. The area of the 'Q' type two-bedroom house was 756 square feet and that of the 'Q' type three-bedroom house 895 square feet; the former of which is by accepted minimum standards 100 sq. feet too small and the latter 50 sq. feet too small. Thus much of the housing in Peterlee during the early fifties was not of very high

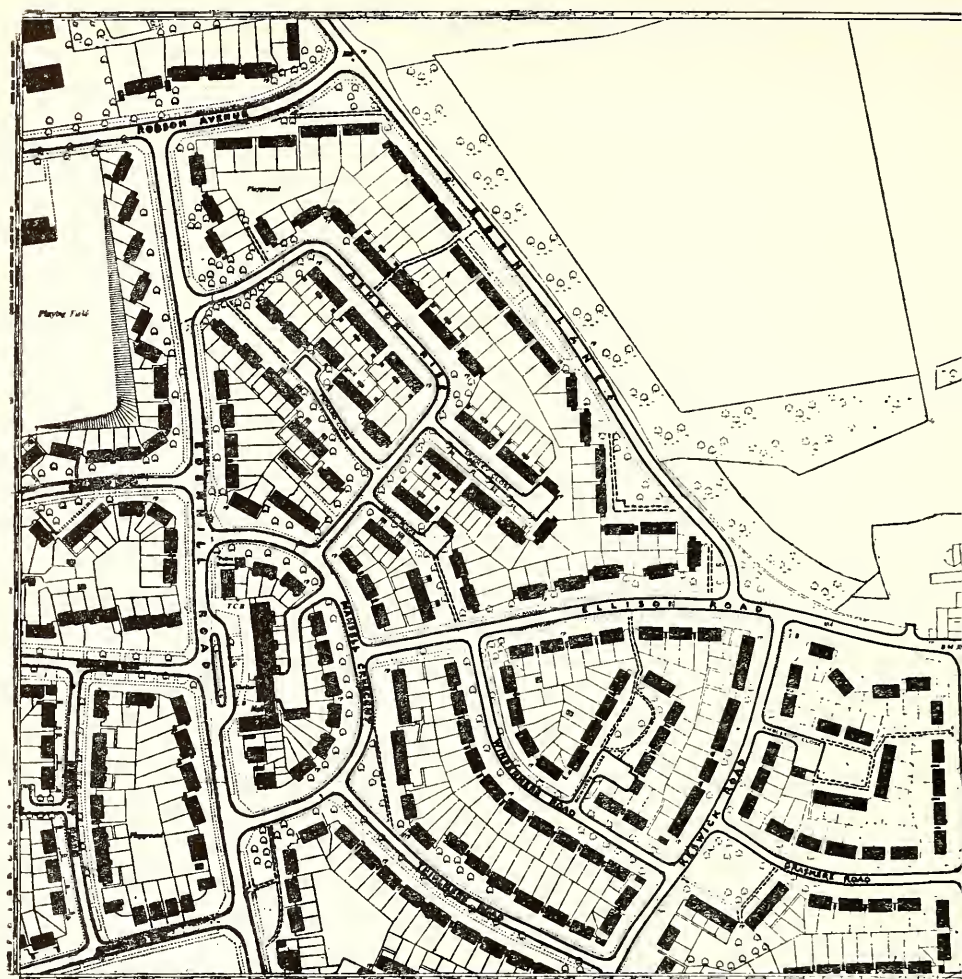


FIG. 34—Peterlee—Chapel Hill with the neighbourhood centre.

standard, but the later dwellings show some improvement. The proportion of flats, mainly of two and three stories, is not more than 10 per cent, while a few houses have been built for middle and higher income groups.

If criticisms can be made of the space standards of the dwellings there is little that is wrong with the layouts of the houses and the architectural effects, many of which are delightful. The pattern of the roads in the residential areas, like that in most of the new towns, is of an irregular character, with curved roads, culs-de-sac sometimes with the end connected to roads by pedestrian ways, while there are open spaces of various shapes and sizes spread throughout the neighbourhoods. Several are small, but several are of a considerable size, as one in the north-west neighbourhood, giving the impression of houses round a very spacious village green. Another, also in the north-west, has a triangular

green bordered by two rows of one-storey houses for old people. Advantage has been taken of the contours of the low hills to make the roads curve with them.

Some very pleasing effects have been obtained on the east side of Easington Way. This is one of the principal town roads which runs north from the town centre between the north-western and north-eastern neighbourhoods. On the west side the neighbourhood has been partitioned off by means of fences or shrubs from this main road and the houses abut variously on to it. On the east side, on the contrary, there is a broad green sloping up from the road and on the lawns are an occasional tree, groups of shrubs and flower beds. At the top of this broad slope houses are variously grouped, some forming a partial courtyard, while at one point three-storey blocks of flats give height and variety. The landscape effect of this east bank of Easington Way is one of the highlights of the town.

Many of the houses are architecturally pleasing; among them are the brick houses with garages and low pitched roofs for middle income groups along Easington Way, and some entirely flat-roofed houses with white cement rendering and weather boarding between storeys in the hilly area immediately north of the town centre.

In the south-west neighbourhood immediately west of Bluntsdene an interesting experiment is in progress. In the 300 acres four groups or communities are planned with a total of some two thousand houses for a population of about seven thousand.

The first of the four groups, completed in 1961, aroused a good deal of attention, especially in architectural circles. The whole south-west scheme stems from a desire of the manager of the development corporation, Mr. A. V. Williams, for improved and more distinctive housing in Peterlee; and he instigated the collaboration of the famous modern painter, Victor Pasmore, with two architects of the development corporation's staff: Peter Daniel and Frank Dixon. Apparently the only instructions that the team received from Mr. Williams were that provided it did not do what had already been done in Peterlee it could do what it liked.

In the first group the purpose has been to plan a compact layout of a formal kind, yet the aim was also to achieve a satisfactory integration with the landscape setting. The intention has been to allow the landscape to flow between the housing groups.

There are thirteen different house types in this first group of 388 houses, the net housing area being about 30 acres, thus a density of about 13 to the acre. Because of the special precautions due to mining subsidence, building is restricted as a general rule to not more than two storeys with a few light three-storey constructions. The house types include detached and semi-detached two-storey dwellings, short rows of three-storey terrace houses and some one-storey houses for old people.

The whole conception of this first section of the neighbourhood is of a formal geometric character. The rectangular blocks of varied

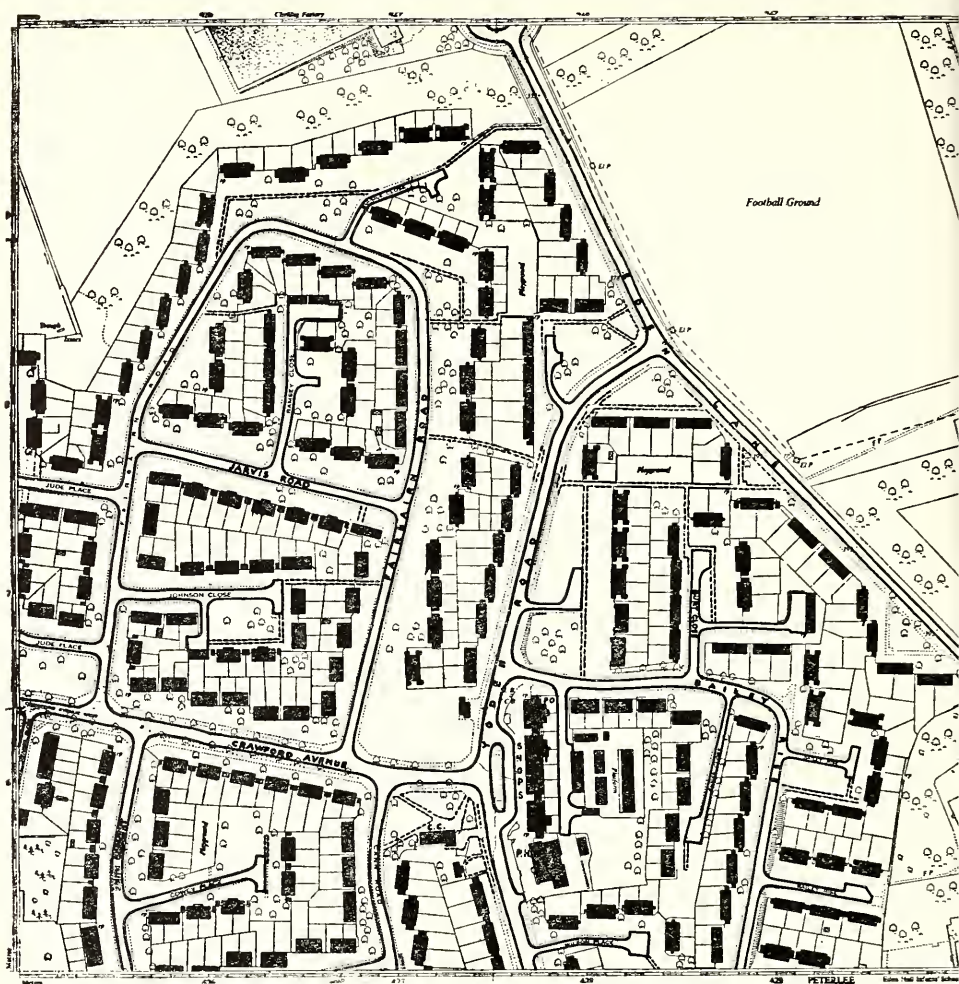


FIG. 35—Peterlee—a part of the Edenhill neighbourhood.

houses are sited on roads laid out in a rectangular fashion, many of which terminate as culs-de-sac and branch from a road which links with the spine road of the neighbourhood. This spine road connects the town centre with the A 19 road bordering the west of the town.

The layout results from a carefully conceived grouping of houses and functional spaces. One group of detached houses is arranged in echelon fashion linked by entrance units. Some have square spaces between them where children can play and cars can be parked. Some of the semi-detached blocks are cubes with small garden spaces on either side which are walled in on two sides and fenced on a third, thus giving privacy. In the patio type of semi-detached house the courtyard garden is enclosed on two sides by the house, and on the other sides by the front wall and a heavy dividing fence. The part of the house opposite the entrance is a one-story structure used, it seems, as a lounge, while the

kitchen and dining room are near the entrance. The patio garden is very small.

In the three-story terrace houses a garage and drying room and a small verandah at the back are on the ground floor, living room and kitchen on the first floor, and two or three bedrooms on the second floor. There is a generous provision of garages throughout this community, amounting to some 205.

The façades of the houses are reminiscent of some of Victor Pasmore's pictures. They are rectangular patterns of black or dark grey and off-white brickwork, and timber boarding painted black, grey, white and sometimes red. The greys and blacks seem to predominate and they make a rather sombre effect which is supposed to harmonise with the bleak atmosphere of the north. One would have thought that the bleak north would have welcomed a brighter effect.

The spaces created by the arrangement of the houses are often pleasant and are occupied by such features as a play sculpture, a paddling pool, areas of grass and an occasional flower bed, while the variety of textures in the footways, concrete slabs, dolomite, gravel and macadam, give interest. Bollards are prominent items of furniture placed to keep cars in their places, but they sometimes provide decorative notes and objects for children to climb over.

The scheme prompts some misgivings. Although thought has been given to the relation of the housing to the landscape, to some it is a formal geometric conception imposed on the site and rather alien to the landscape. Also there is the feeling of compactness at any price; the tiny gardens seem boxed in. One visitor thought of crated human beings, a very depressing feeling that is not without justification. Residents seem to be very willing to show visitors over their houses. A resident of more than average intelligence when interviewed was asked what he thought of the scheme. He remarked that he thought it probably looked very good on paper, which carried a note of criticism. He also remarked that it would be nice to have a bit of garden. (He lived in a three-storey terrace house without a garden.)

What will we think of the scheme in twenty years' time? Its authors have been very scornful¹ of the earlier more traditional housing, one remarking rather despotically that 'we decided that we shall not tolerate the back garden mania of the new town', but it is not improbable that in twenty years' time we shall realise that the earlier housing of Peterlee was nearer to human needs and wishes than this rather academic architectural experiment. This type of development would be more acceptable with more generous space standards, especially in the matter of gardens. It is a question whether the open space that flows between the groups would not be more appreciated if it were utilised as larger private gardens.

¹See *Architectural Association Journal* for June 19, 1961.

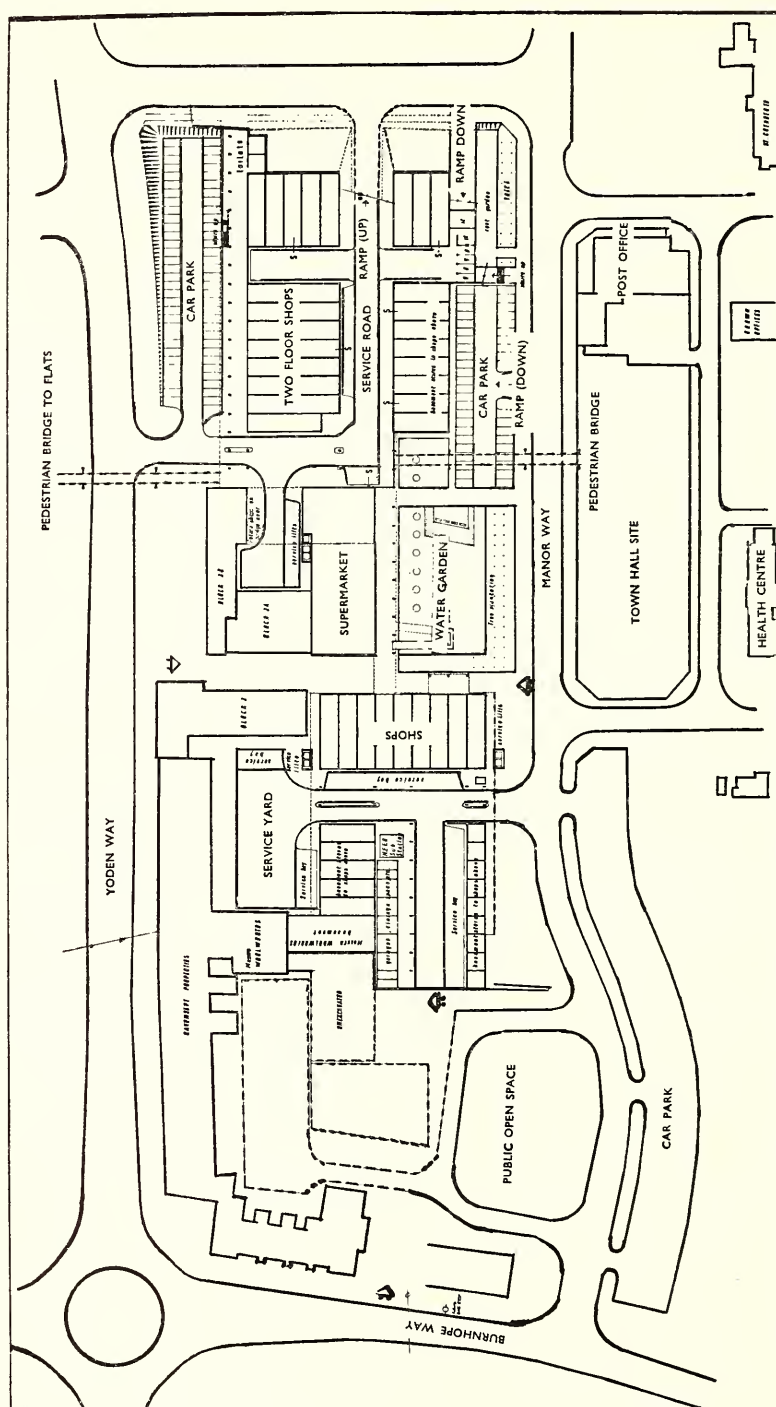


FIG. 36—Peterlee Town Centre—This centre with considerable pedestrian areas is planned on two levels—this plan is of the lower level.

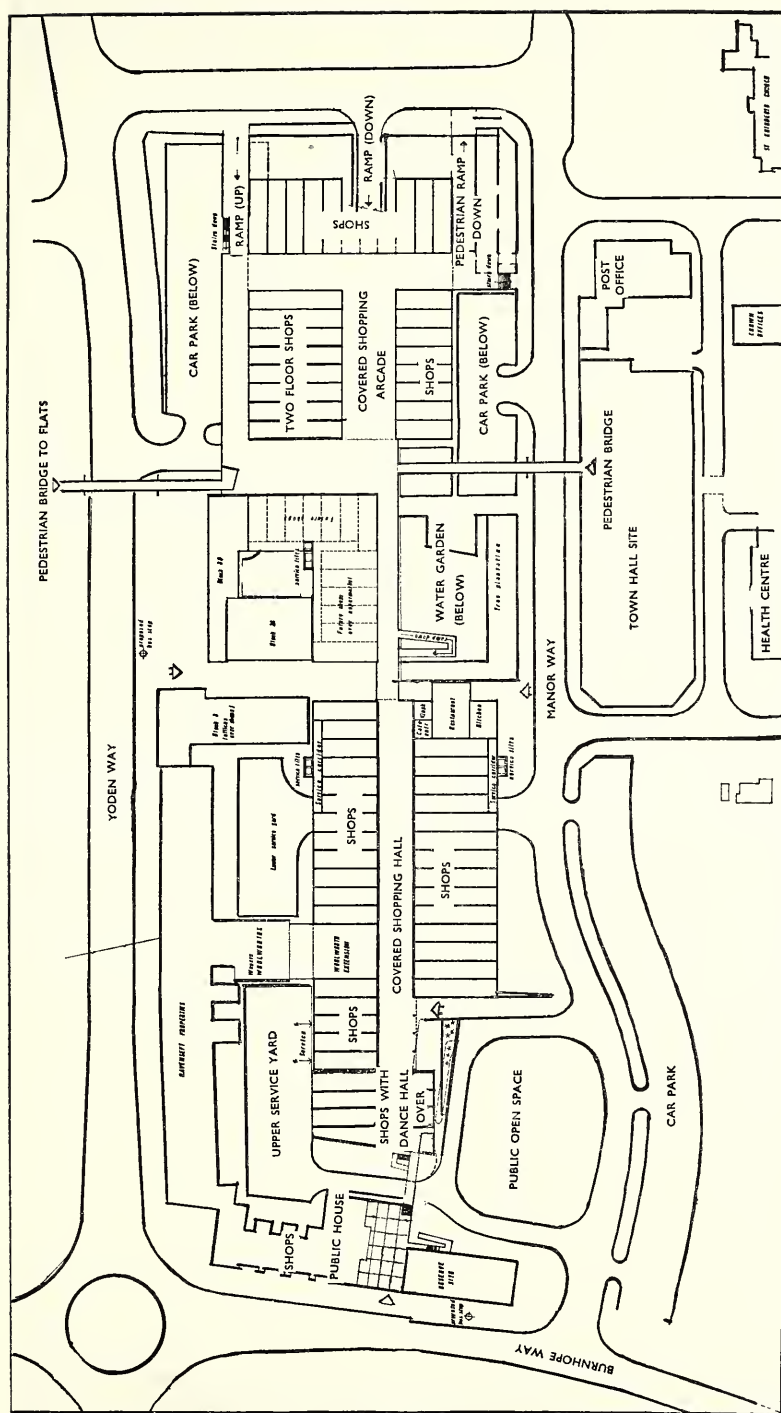


FIG. 37—Peterlee Town Centre—plan of the upper level.

NEIGHBOURHOOD CENTRES

Of the four neighbourhood shopping centres completed by the end of 1961 that of Chapel Hill in the north-east neighbourhood in Edenhill Road is perhaps the most attractive. It consists of eight shops, five of which are parallel with, and set well back from, the road, with buildings, one a common or community room, at each end sited obliquely from the road so that a large bay is formed with wide pavements and stretches of grass in front of the shops, which are in two-storey buildings with flats above. The centre off York road in the north western neighbourhood consists of two rows of shops forming two sides of a square with a triangular space in front. Opposite this is the attractive building of the secondary modern school.

The other two centres are just rows of shops on one side of the road, the footway in each case being raised from the road. That of Edenhill in Yoden road in the north-eastern area consists of a row of eight shops with flats above, and a public house, the 'Royal Arms', at one end. Opposite this is a community hall. The other at Beverley Way in the north-west area is a row of four shops set in a three-storey building block of interesting design. The upper storey has a recessed balcony, the two square windows are set in a brick wall, the middle storey is faced with timber boarding, while the shop front is framed in a strongly defined rectangle, with extrances on either side. The building is interesting architecturally, but as a small shopping centre it is a little uninviting and has not the intimate quality of the partial enclosure of the Chapel Hill centre.

TOWN CENTRE

By the end of 1959 the town centre was just a row of some twenty shops along Yoden Way and it is doubtful whether, as previously indicated, it is keeping pace with the needs of the town. A 'working men's' club has appeared to the north of the centre, two churches to the south, a health centre, and that is all. However, it is planned to have about 110 shops, a departmental store, public houses, administrative buildings, various office premises, a market and entertainment centre, a hotel and library. The plan in the publication entitled *Master Plan of 1952* did not strike us as very good; it appeared to be a collection of island sites for the various buildings surrounded by roads, a kind of irregular chess-board pattern, and was obviously planned before the value of the precinct as exemplified at Stevenage and Coventry was fully realised. The later plan now approved by the Ministry of Housing and Local Government is very much better, and consists of several pedestrian ways or precincts between shops, and car parks in the court-yards at the rear of shops. A central pedestrian way between shops runs at right angles to Yoden Way into a market square, and two pedestrian ways branch off in either direction. The development is on two levels (see plans pp. 222-3), which is facilitated by the contours of the site.



(a) Wigmores South, a new pedestrian shopping way in the town centre.



(b) Methodist Church and Hall near the Woodhall centre.
Architect: Paul Mauger.

Plate 37.

Welwyn
Garden City.

(c) A curved convex three-storey block with twenty six shops in the Woodhall centre.





(a) Group of five shops in the minor unit centre of Hatfield Hyde.



(b) Group of three-storey houses (a flat on the ground floor and maisonette above) on a hill in the north-west area near the crossing of Knightsfield with Digswell Road. Architects: Louis de Soissons, Peacock, Hodges & Robertson.

Plate 38.
Welwyn Garden City.

(c) Group of houses west of Digswell Road in the north-west neighbourhood.





(a) Houses at Graysfield built for sale by the development Corporation.

(b) Terrace block of three-storey houses.



Plate 39.
Welwyn Garden City.

(c) Factory building of the Plastics Division of I.C.I. in the north-eastern industrial area, seen from across the railway.



INDUSTRIAL AREA

Five factories had been completed by 1961, and the development corporation is optimistic that more industry will be attracted to Peterlee as it is obviously very important that there shall be a diversity of industry to ensure some stability of employment. Other than those employed in the five factories most of the working male population is engaged in coal mining. To secure more different industries is more urgent in the early sixties than the early fifties because the coal situation has changed considerably. In the early fifties not enough coal was being produced to meet the country's needs; by the late fifties there was an excess of production and early in 1963 undistributed stocks stood at about 25 million tons. As a consequence uneconomic pits were being closed and there will obviously be less employment in the mines. It is therefore very important to find alternative employment for displaced miners in the coal areas, and this should be regarded as a chance for Peterlee. The government should give all possible encouragement, for here is an excellent area for factories in a new town with some well planned residential areas. The factories already built are well sited and architecturally attractive and they have set a high standard.

An ex-coal miner, Mr. J. G. Marvell, writing of the changed situation in the coal mining industry in a letter to *The Times* (August 14th 1959) speaks of the economic crisis that this change may produce among miners and he says that 'if other employment could be provided in areas where it may be commercially desirable to close pits the crisis could be softened in its impact'. He remarks that 'it is unlikely that private enterprise will find sufficient inducement to establish factories in such areas and at short notice', and he therefore suggests that various national bodies—the National Coal Board, the National Union of Mineworkers, the Ministry of Labour and the Ministry of National Insurance—should promote other forms of industrial investment in these areas.' He further points out that 'the savings in the form of compensation, unemployment and national assistance payments' could all be more usefully employed by such investment. It is obvious that Peterlee is just such an area, and it is equally obvious that if private enterprise will not take or build factories at Peterlee then some such action should be taken as suggested by Mr. Marvell.

SOCIAL ASPECT

Talks with miners in Peterlee show that for the most part they like the new town; they appreciate what is being done for them in improved housing. Some are beginning to think of Peterlee as a beautiful place. There is a feeling, however, especially among younger residents, that there has been too much delay in providing recreation in the town centre. It must be remembered that Peterlee is designed partly to meet the needs of a scattered population of some 82,000 in the Easington rural district. In creating a town centre with recreational facilities it is

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thus providing for this population, and it is regrettable that progress with the centre has been so slow. To satisfy needs in a reasonable time a large multi-purpose hall, library, and perhaps a cinema should have been started sooner.

This is not to deny that the community association performs a useful service, and that the community halls and common rooms such as those in the neighbourhood centres, and that at Eden Lane, are valuable, but they do not take the place of an attractive town centre with provision for the entertainment of those who wish to take some of their pleasures apart from community organisations and societies. It may be questioned, too, whether the various societies affiliated to the community association are satisfied with their premises, and whether, for example, the drama group would not appreciate a small theatre in the town centre partly as a stimulus to its own activities, or whether many of the other associations would not find a good hall in the centre of value for some of their larger meetings.

The community association, the various societies and the community halls fulfil important social needs, but they are by no means enough, and more thought should have been given to the general recreational provision in a town centre to satisfy not only the needs of the town as a whole, but the population of the region of which it is the heart.

Chapter XIX

WELWYN GARDEN CITY

AN account has been given earlier in this book of the origin and planning of the second garden city of Welwyn in 1919-20. It was then designed, in accordance with Sir Ebenezer Howard's intention, to have a maximum population of 50,000. By 1938 it had reached a population of about 13,500, and ten years later about 18,500. In that year, 1948, it was decided to develop it further as one of the new towns, and it was designated as such on May 20th, and a single development corporation was appointed for Welwyn and the neighbouring new town of Hatfield, which was one of the towns proposed for expansion in Abercrombie's Greater London plan.

The question was raised in Chapter VIII whether it was necessary for the Government to take over the development of Welwyn Garden City. The reasons were given by the Minister of Town and Country Planning in an explanatory memorandum to the Draft Designation Order. It was argued that the expansion of Welwyn Garden City was an integral part of the Greater London plan, that the creation of new towns and decentralisation from London were complementary aspects of the same policy, and that a 'private company concerned only with expansion, and having no responsibilities for decentralisation could hardly be expected to ensure the complete co-ordination of these two aspects in the same way as they would be ensured by a public corporation created by the Minister and acting in accordance with his general directions'. The Minister thought it 'undesirable that a private company, however public-spirited, should by virtue of its ownership of most of the land and buildings, be in a position to determine the character of a whole town and the living conditions of the majority of its inhabitants'; such power should be vested not in a private concern but in a body representing the people. The argument was not very convincing because the whole policy of dispersal by means of new towns sprang from the ideas on which Welwyn had been founded. It is possible that the decision was influenced by political considerations of a rather doctrinal or academic character. But the subsequent history of Letchworth gives colour to the Minister's doubts, and it is also true that the Urban District Council requested Silkin to designate Welwyn Garden City as a new town.

Another reason adduced for taking over Welwyn was that its development could be integrated by a single corporation with that of the neighbouring town of Hatfield. Again this is not very convincing,

WELWYN

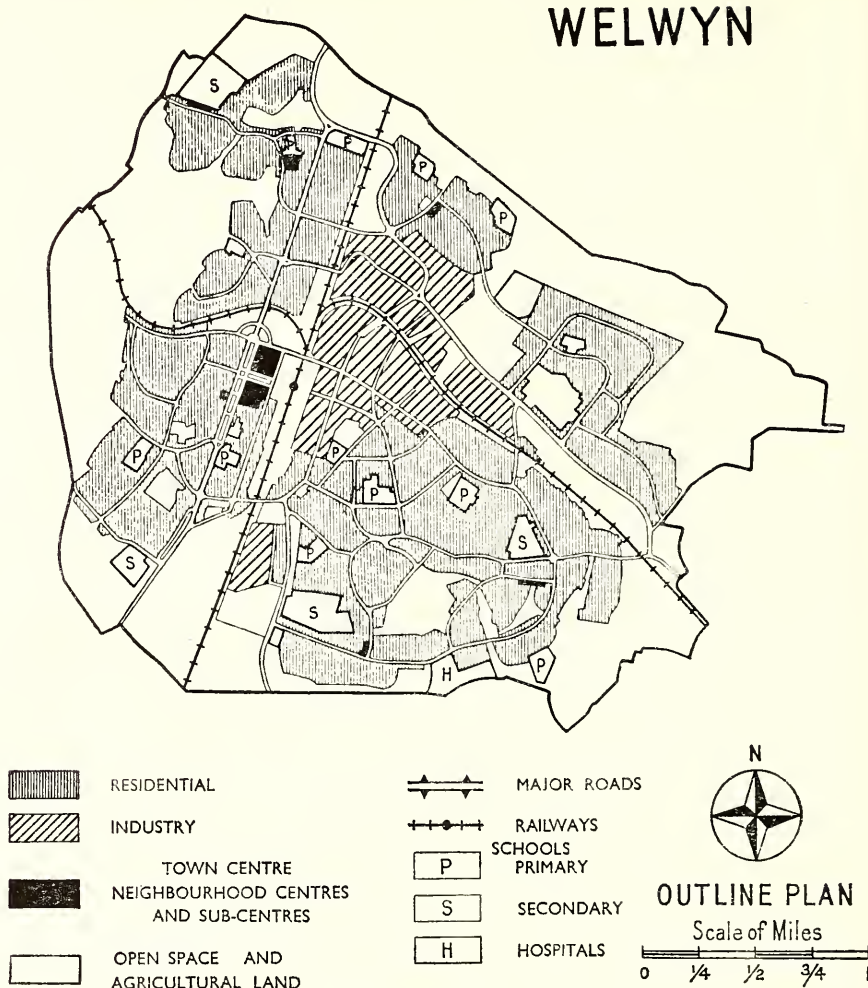


FIG. 38

because there is no reason to suppose that the Welwyn Garden City Company would not have co-operated to the full on plans approved by the Ministry.

Welwyn Garden City is about 20 miles north of King's Cross on the main line to Peterborough, while the Great North Road forms its western boundary. The whole site of 4,317 acres is in the area of the Welwyn Garden City Urban District Council. The land is gently undulating with a general gradual decline to the south-east and is somewhat hilly in the north-west. There is a good deal of woodland. The maximum population was at first fixed at 36,500, but this was increased to 50,000 in 1954 in accordance with the original intention as land in the north-east originally proposed for gravel extraction will not be used for that purpose, and will thus be available for housing.

OUTLINE PLAN

The original plan had been prepared by Louis de Soissons, R.A., and in 1948 the corporation decided to continue his appointment as planning consultant, to ensure continuity on the established lines.

The designated area is divided into four quarters by the railways, the main line to the north and the branches west to Luton and east to Hertford, and this has controlled the plan which consists of four principal sections. The south-west area was almost fully developed at the time of the designation when it had a population of 7,300, which it is proposed to increase to about 8,300. This includes the spacious town centre. Part of the north-west area had already been completed with a population of 1,088, and this is being increased to 9,360 by an extension northwards. The industrial area lies to the east of the main railway, and on both sides of the branch line to Hertford. The north-east section is an almost entirely new development: its population, only 77 in 1948, is to be enlarged to about 11,800. The largest of the four sections is the south-eastern which had a population in 1948 of 9,800 and which is enlarged to about 20,500.

These four main divisions are served by unit centres and minor unit centres. The revised plan (1957) provides for three of the former, one in the north-west, one in Panshanger, and an extension of Woodhall centre. There are six minor unit centres, one in the north-east, four in the south-east, two entirely new, Ludwick and Hatfield Hyde, and two existing, Peartree and Knella, with Handside in the south-west. Some of these centres include a public house, a church, community and health centre. In each of the unit centres the shops are on one side of the road only, and are often situated with a generous provision of footway in front of them. Each of the areas has junior and primary schools, while two secondary grammar schools are provided in the south-west and north-east areas, and five secondary modern schools, one each in the south-west, north-west and south-east, and two in the north-east.

There is a generous provision of open spaces in the plan. Within the designated area there is agricultural land to the south and east, amounting to about 500 acres, playing fields of about 250 acres, a golf course along the western boundary of about 80 acres, while adjoining this and stretching northwards in the north west area are Sherrardswood, which includes Brocks Wood, Temple Wood and Reddings Plantation. Sherrardswood with the tree belts, the handsome parkways in the town centre, and the smaller open spaces intermingled with the residential areas, make a total of about 600 acres. Of the total area of 4,317 acres, about 1,507 acres are open space much of which is of a woodland character. There is reason to believe that a green belt will be maintained to the west, north and east but the southern boundary of Welwyn is the northern boundary of Hatfield, and between the two towns the green belt is only 1,000 yards in depth. This green belt should be regarded as inviolable.

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BUILDING THE ADDITIONS TO THE ORIGINAL TOWN

The town was continued under the development corporation in 1949 firstly by the completion of Parkway and the south-west area followed by an extension of the south-eastern area with the new neighbourhood centre of Ludwick and an extension of that of Woodhall. The extension of this section was nearly completed by the end of 1957. Work on the north-west section began in 1956 and was well advanced by the middle of 1959. A start on the north-eastern section was postponed by delay in determining the line of the north-east industrial road which, originally to run east of the section, now runs through its western part.

The number of houses built up to the end of 1952 from the time of designation was about 420, after that the rate was much higher, an average of about 500 a year, so that by the end of 1962 about 6,575 had been completed of which about 4,935 had been built by the development corporation and 1,341 by the local authority and the rest privately. In the same period seven new schools have been built including two secondary modern, two junior, two infants and two junior and infants mixed.

Industrial employment is ahead of housing in Welwyn Garden City. At the time of designation 8,300 persons were employed in the manufacturing industry, and another 3,600 in retail trade, building and other service industries, professional work and various forms of agricultural work. 11,900 employed persons in a town with a population of 18,000 meant that a considerable number, probably some 3,000 to 4,000, came into Welwyn each day to work. Thus there was considerable housing leeway to make up, and it was important that house building should be at a faster rate than industrial building. Steady progress has been made with the building of new factories of various kinds for a diversity of industry, but a satisfactory balance of industrial building and housing had not yet been achieved, and industrial development is likely to be restricted so as to enable the demand for housing, from those already working in the town, to be met.

RESIDENTIAL AREAS AND HOUSING

One criticism that has been made of some of the residential areas of the new towns is that the houses are predominately for one stratum of society and although they may have variety of layout and architectural treatment there is for this reason still a consciousness of sameness. A greater mixing of income groups as symbolised by the houses would have been welcomed. This is not easy to achieve in a new town; but social variety has been a constant aim in building Welwyn Garden City, and by 1948 considerable success was achieved in this respect. But even here the criticism was sometimes made that there was too much separation of the housing for the different social strata and that in the north-west neighbourhood and in a large part of the south-west there was too high a proportion of middle and upper-middle income groups, whereas in the south-east there were in proportion too many houses for the lower

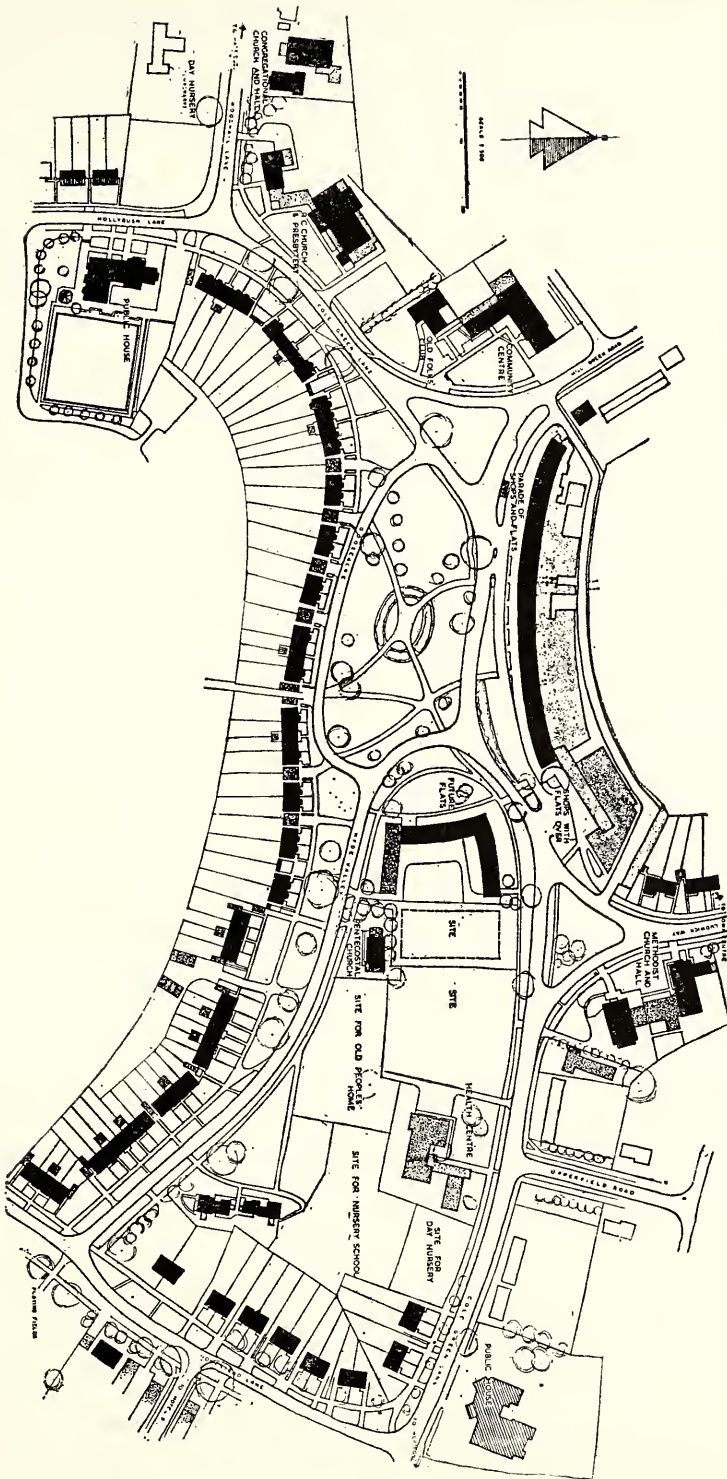


FIG. 39.—Welwyn Garden City—Woodhall Centre.

income groups. The development corporation aims to rectify this. In endeavouring to obtain a more balanced development houses are grouped into the categories of weekly rented, monthly rented and privately owned which roughly represent the three strata. The first are generally the smallest houses and are built at the highest density, and contain a large proportion of terrace houses; the second are built at a somewhat lower density, and include fewer terrace houses and a fair proportion of semi-detached, while the privately owned are built at a still lower density and include a large proportion of detached houses. It was felt by the development corporation that there were too many of the weekly rented houses in the south-east in relation to the other types, and not enough of these in the north-west area, and the aim in the completion plan has been to rectify this and secure a good balance throughout the town. The aim is to provide in the south-west for 37·5 per cent of the population in weekly rented houses, 22 per cent in monthly rented houses and 40·5 per cent privately owned. The corresponding proportions in the other neighbourhoods are: in the north-west 46·4 per cent (W.R.), 26·7 per cent (M.R.) and 26·9 per cent (P.O.); in the north-east 77·8 per cent (W.R.), 20·8 per cent (M.R.) and 1·4 per cent (P.O.); and in the south-east 87·1 per cent (W.R.), 9·8 per cent (M.R.) and 3·1 per cent (P.O.). It is doubtful, judging from these figures, whether there is here a sufficient balance of types for it will be seen that the higher income groups are still in a majority west of the town and in a minority on the industrial side east of the town. A little more mixing would have social and aesthetic advantages, but no town in England is free of this kind of segregation.

The layout of the houses in the new areas follows very much that of the former development. The residential roads are, for the most part, a series of curves forming a pattern of islands or 'super-blocks' into which run culs-de-sac. Sometimes these form loops with grass areas in the centre, sometimes the terminations of the culs-de-sac are connected by footpaths. In many cases, following some of the attractive effects in the earlier north-west and south-west sections, the conventional front gardens separated by hedges or fences are eliminated, and instead lawns stretch in front of the houses which gives a pleasing open effect. The first housing groups, as early as the nineteen twenties, had these open forecourts, but it was found that most occupiers prefer front gardens for their own cultivation, and both methods have been employed since. Trees either line the roadways or are grouped in particular spots, and wherever possible existing trees are preserved. The landscaping of the residential areas of the earlier Welwyn was brilliantly effective in producing a setting of trees and shrubs and lawns for houses of all kinds, as near to a natural grouping as possible. Its aim was to bring the country, with much that makes it delightful—the sense of peace, the seasonal changes, the sound of the wind in the trees and the song of birds—into the residential area. The older parts of Welwyn planned on these lines constitute some of the most pleasing residential areas in England.

A special nursery—Digswell Nurseries, Ltd.—was started at the time of the foundation of the town in 1921 to supply it with trees and shrubs for landscaping, and the firm was taken over and extended by the development corporation and is continuing the work both in Welwyn Garden City and Hatfield. Of course in the early stages when small trees and shrubs have just been planted the roads are apt to look a little bare, but even after a few years the new districts are beginning to have something of the charm of the older.

The houses vary with the architects and with the types and sizes, but there seems to be a pervading spirit which gives them unity. It might be described as a liking for plain walls with careful attention to the placing of the windows on the wall space; and as design actuated by a taste for simplicity and good proportion, very much in the spirit of the Georgian tradition. Much has been due to the influence of Louis de Soissons who was responsible for the design of many of the earlier houses, and whose work has much of Georgian character. It must be admitted that some of the terrace houses for the lower income groups hardly live up to these standards, but the majority certainly do. Among the best of recent groups from an aesthetic standpoint are four terraces of three-storey houses (a flat on the ground floor and maisonette above) on a hill in the north-west area which occupy the four corners at the crossing of Knightsfield with Digswell Road. The proportions are excellent, the detailing is of a refined character while some delightful stylistic balconies are introduced. In these four short terraces much of the grace of Georgian domestic architecture at its best is revived. That they are designed by the firm of architects, Louis de Soissons, Peacock, Hodges and Robertson, which has been responsible for a large amount of the housing in the new town, is testimony that the spirit that actuated the architecture of the original town still prevails.

NEIGHBOURHOOD CENTRES

As most of the building in the early period of the development of the new town had been in the south-east area, it is here that are found the chief completed examples of unit and minor unit centres. Woodhall, which had been partially built before the war with ten shops, has nearly trebled its size, while the new minor unit centres of Ludwick and Hatfield Hyde have been completed.

Woodhall consists of a considerable number of buildings grouped round an oval open space which makes it a large and fully equipped neighbourhood centre. To the north of the green is a curved convex three-storey block with 26 shops and a bank with bachelor flats over and a service way at the rear. On plots to the north-east is a Methodist Church and Hall, and beyond in the same direction is a public house. To the east of the central green is a Pentecostal Church, a Health Centre, and sites for an old people's home, day nursery and nursery school. Curved along the south of the centre are semi-detached and terrace houses, terminating in the southern curve with another public

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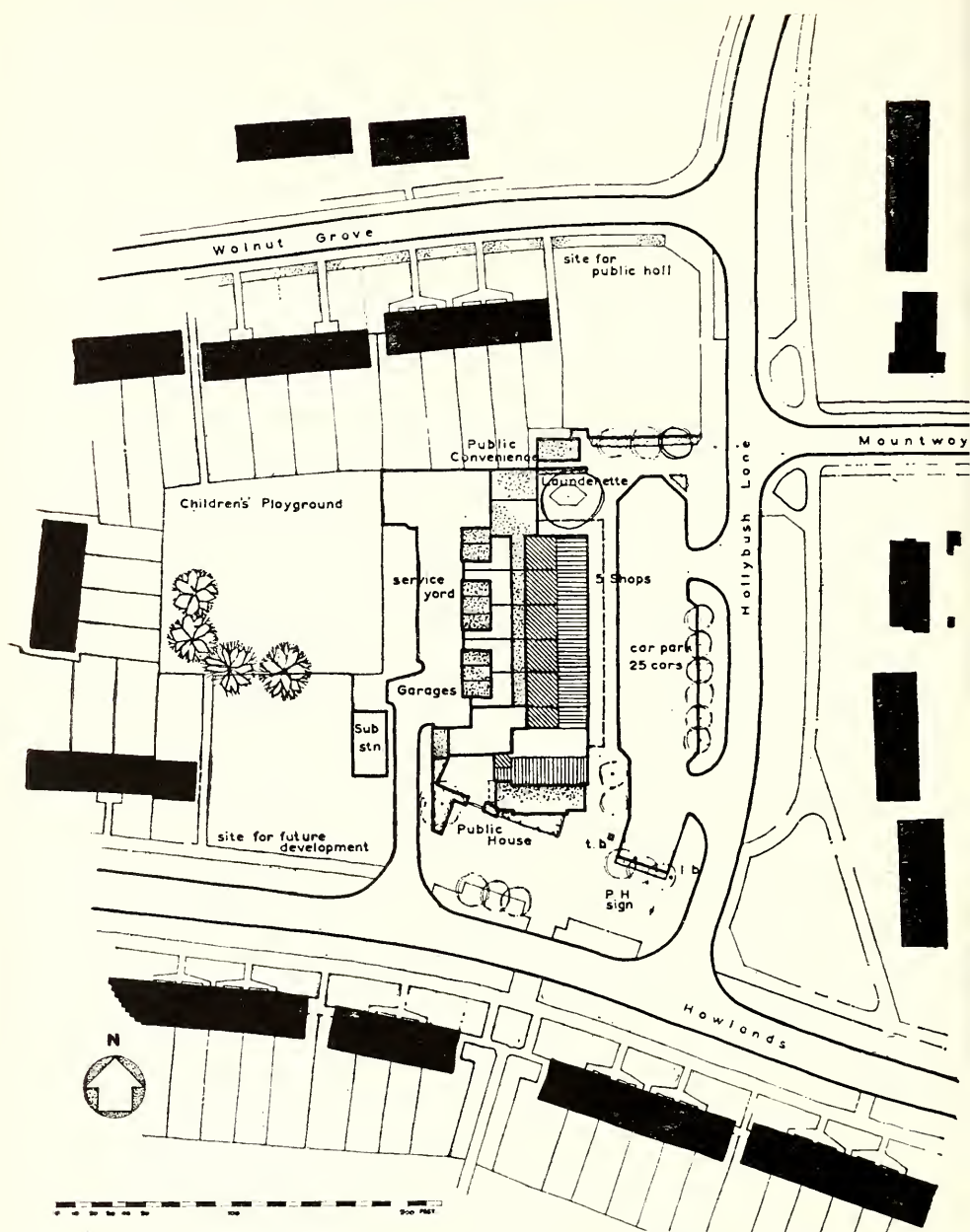


FIG. 40—Welwyn Garden City—Hatfield Hyde Centre.

house. To the west is a Community Centre, an Old Folks' Club, a Roman Catholic Church and a Congregational Church and Hall. One might say what more could one wish, for the centre of a large neighbourhood, unless it be a cinema, and even that in the days of television is problematical. Halls for dancing, amateur drama and music exist in the various church halls and the community centre. If there is one

criticism it is that the buildings are a little scattered; a more compact arrangement around a more exclusively pedestrian area might have had advantages.

Ludwick with seven shops and Hatfield Hyde with five are planned on similar lines. Both consist of a row of shops with a service yard at the back, a wide footway in front, and a space for car parking. At the end of the row of shops in the former is the Ludwick family club and a public house. There is also a public house at the end of the row of shops at Hatfield Hyde, with the Hyde club and a church on the opposite side of the road.

TOWN CENTRE

The plan of Welwyn Garden City is an interesting combination of irregular layout of roads and spaces—a system of varied curves, culs-de-sac and closes—and the classical formal planning of its centre. An almost straight broad thoroughfare runs parallel with the railway from the southern extremity of the town to the northern. From South Parkway it broadens out to Parkway—a broad green between two roads. The road rises very gently and this middle green terminates in a semi-circle, flanked by extensive parklands. The road continues however up the hill over the railway, becomes Digswell Road and traverses the hills and valleys of the north-west neighbourhood and separates it into two. It is a traffic thoroughfare, but it is segregated with hedges and grass verges almost as completely as a railway track. There are two pedestrian underpasses for shoppers and school children.

At right angles to the broad central Parkway is another, Howardsgate, named in memory of the town's founder, which stretches for about 400 yards to the station. On either side of this between Parkway and the station is the town centre. It consists for the most part of shops in rectangular blocks surrounded by straight roads, the descendant of the Greek chess-board plan. Additions of several shops and offices have been made south of Howardsgate, some of which flank a pedestrian way and in the semi-circular area north of the shopping centre; there are the College of Further Education, the Council Office, and the Police Station. A theatre, library, art gallery, and concert hall and hotel are expected to follow, thus forming a valuable cultural centre. Several details of the town centre are still in a fluid state.

Since Welwyn Garden City was originally planned, ideas have changed of what a centre for a town of medium size should be. In 1921 the motor vehicle did not occupy so prominent a place in the urban scene as it does in 1963. The necessity of segregating the motor vehicle and the pedestrian in urban centres is felt far more strongly in 1963; in 1921 it was mooted but strongly opposed by retail traders. Thus with the example of Stevenage and Harlow a problem may be how to make the centre of Welwyn Garden City more of a pedestrian precinct, for it must be insisted that this is desirable in any modern shopping centre. It is important that people should be able to go shopping with that

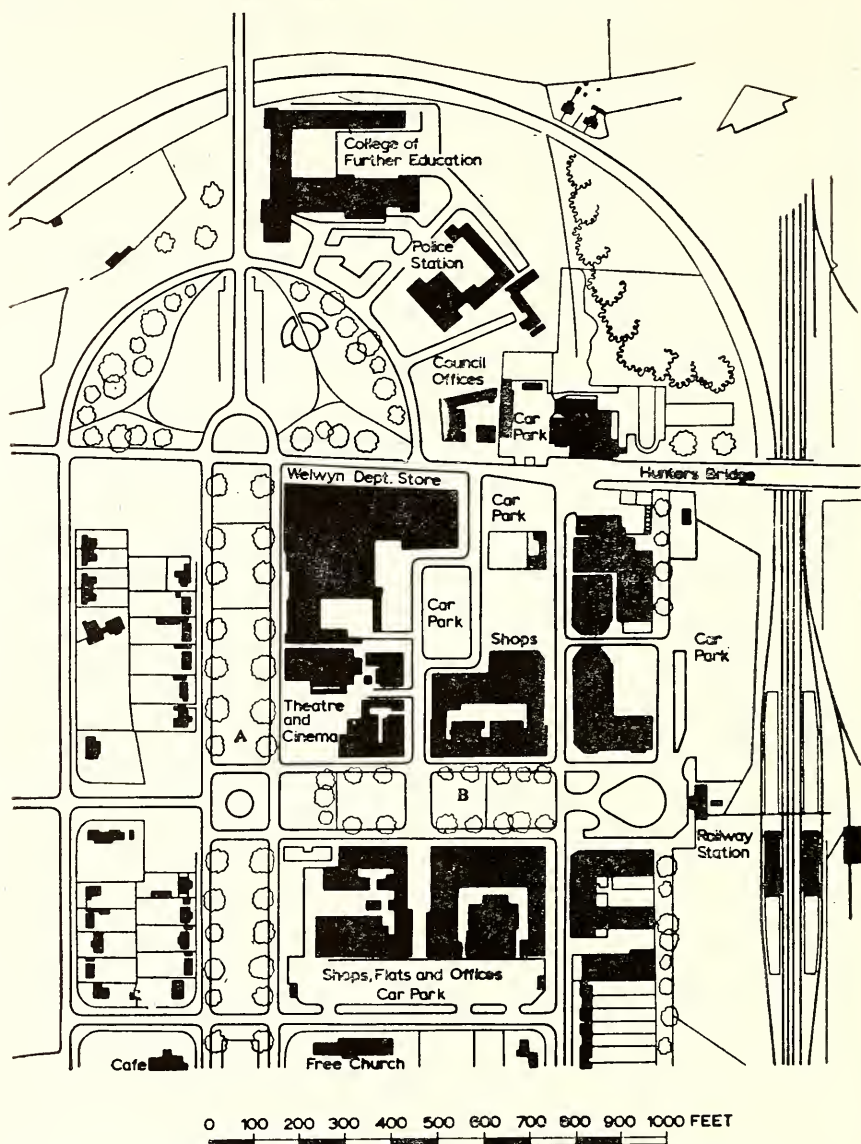


FIG. 41—Welwyn Garden City Centre. A principal feature of this formal plan is the broad avenue (A) Parkway running north-south (see Fig. 4). Howardsgate (B) runs at right angles linking with the railway station. The new development south of this incorporates a pedestrian way.

relaxed feeling that freedom from the thought of road traffic can give. Equally important is provision for waiting cars. Welwyn Garden City has (unexpectedly) become a shopping centre for a wider region, and at peak periods many hundreds of cars are parked in all the central roads. It is intended, we understand, to create underground car-parks on a large scale.

Whatever is done with the centre of Welwyn Garden City it is im-

portant that the central avenues of Parkway and Howardsgate, with the circular campus to the north should remain as they are because they represent one of the most beautiful examples of formal landscape planning in Europe. As one comes down Digswell road over the railway bridge the view along the lawns of Parkway to the central fountain spreading its foam against the trees that diminish in the long perspective to the blue distance beyond, is one of the unforgettable sights of England.

INDUSTRIAL AREA

The main railway running south-north cuts the town in half, with a little under two-thirds of the population on the east side and a little over one-third on the west side. The industrial area occupies a central area immediately to the east of the railway, with a small additional industrial section to the south. By the end of 1962 there were well over a hundred factories employing over 13,000 persons. Many of the larger factories representing over 80 per cent of the industrial area have been built by the firms for their own requirements while others have been built by the original Garden City company and the development corporation for letting to smaller firms. The two largest factories are those for the Plastics Division of I.C.I., which is situated at the northern end of the industrial area, and the factory for Murphy Radio, each of which employs about 2,000. The central situation of the industrial area makes it within easy reach of any part of the town, the greatest distance being little more than a mile.

If the industrial area has not the attractive general effect of the industrial area of Crawley, it yet has an interesting variety of buildings many of which are of a distinctive architectural character as well as being well and spaciouly sited with a view to possible future extensions. In this area the monotony of the one-storey industrial estate is avoided. Among the more distinctive buildings are those of the Roche Products factory, built shortly before the war and later extended, the I.C.I. Plastics factory with its complex of many buildings including a long three-storey block and the Murphy Radio factory. The sectional factories for letting usually have a two-storey administration building in front with a one-storey section in the rear.

THE SOCIAL ASPECT

In the emergence of a social life in the new town Welwyn Garden City had certain advantages over the new towns where previously there had been only small scattered populations because many social activities were already in existence at the time of designation, and a great number of societies catered for a variety of interests. These were able, in some cases, to provide a nucleus for extension into other areas of the town. Yet there was no community association, which had proved so valuable at Crawley, and it was necessary to help to provide some general social and recreational life to the newcomers to the town.

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Married couples and single men and women had come to work in the factories of the new town, the former to set up home, the single to live in lodgings or flats. Some had been accustomed to an urban type of life and had enjoyed recreational pursuits of various kinds and they naturally wished to find these at Welwyn. It is inevitable that some at first experienced a feeling of disappointment at the lack of a choice of several cinemas, dance halls and cafes and opportunities for recreational pursuits, and Welwyn has with other new towns been criticized for a shortage of these. Yet more active enquiries on the part of newcomers to a town would often result in an awareness of manifold social activities that were unsuspected. There is the Barn Theatre, which is an important centre for three or four dramatic groups, there is no lack of societies of all kinds, there are playing fields and many rugby, soccer, cricket and tennis clubs, churches of many denominations are active in providing for recreational and social needs and many small halls and meeting rooms are available, while the Hertfordshire County Council is alive to the cultural needs of the town. It may be said that there are plenty of social recreational and cultural activities in Welwyn for those who look for them, while Youth Clubs, such as that in the sub-centre of Ludwick provide for a variety of interests.

Two enterprises of a less usual character deserve special comment. To the north-west of the town is Digswell Conference House which was once a school, but had been discontinued as such. It was too fine a building, the development corporation felt, not to be put to some valuable use. In 1957 an Arts Trust was established in Welwyn Garden City with a number of eminent persons in the art world as trustees and Digswell House became the arts centre. The purpose was to provide residence, studios and workshops for artists of all kinds, not only painters and sculptors but designers and makers of stained glass and furniture, pottery, metal work, fabrics, indeed for practitioners in all the visual arts. By 1961 sixteen artists were in residence and they include several well-known sculptors and painters who have held one man shows in London, and one of the designers of the stained glass windows in the new Coventry Cathedral. The Digswell Arts Centre is becoming one of the most important artists' communities in the country.

Not far from this arts centre is Digswell Lake, some seventeen acres in extent. In 1956 a society was formed with the object of preserving its natural beauty and as a sanctuary for certain fauna and flora and aquatic birds. The corporation granted a lease to the society and the area was fenced off and enjoyment of this lovely sanctuary is secured by becoming a member of the society, a membership which includes the family.

Chapter XX

HATFIELD

SIR PATRICK ABERCROMBIE in the *Greater London Plan* proposed that Hatfield should be enlarged from its 1938 population of about 9,000 to 22,000. This proposal was supported by the Advisory Committee on the Greater London Plan that reported in 1946. The proximity of Hatfield to Welwyn Garden City, which had been similarly recommended for expansion, prompted Lord Silkin, the Minister of Town and Country Planning, as previously noted, to designate the two at the same time. The explanatory memorandum on the draft designation orders stated that although the two towns are to be kept separate, their close proximity means that 'the development of one cannot be carried through without the closest regard to, and some integration with, the development of the other.' Although two development corporations were appointed, they had the same personnel. This would 'ensure the closest co-ordination and the greatest economy in the development of the two towns.' These are, with Hemel Hempstead, really expanded towns, so that in reality only five completely new towns are being built round London and not eight as suggested by Abercrombie.

The designated area is 2,380 acres to be occupied by a maximum population of 25,000. It is situated in the Hatfield Rural District, and is approximately 18 miles from London on the main line from King's Cross to Peterborough and $2\frac{1}{2}$ miles on the London side of Welwyn Garden City station. The site extends for about $3\frac{1}{2}$ miles in a south-north direction and is only about a mile wide east-west, enclosed by the main line railway and the Great North road on the east, and the Barnet By-Pass to the west. The area broadens out in the north where it adjoins the boundary of Welwyn Garden City, but this part, through which runs the river Lee, forms the green belt between the towns, the northern boundary of the Hatfield built-up area being approximately the North Orbital Road. A green belt on the south separates Hatfield from the village of Welham Green. The country is undulating with some attractive woodland scenery in the southern part.

Although Hatfield is a close neighbourhood of Welwyn Garden City, too close some would say, it presented at the time of its designation completely different material for the planner. The latter was a town gradually growing on preconceived lines to the maximum ultimately determined, and it represented some of the best residential planning in the world and was a subject of international admiration. Modern

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Hatfield, on the other hand, was an ill-conceived growth resulting from the impact of the introduction of a large aircraft works on an ancient semi-urban settlement. The old town of Hatfield is pleasant enough; it had grown in proximity to the Renaissance Palace of Hatfield House, the ancestral home of the Cecil family, and had spread a little from being a stage on the road route northwards from London on either side of the Great North Road, and later round the railway station. The aircraft factory of the De Havilland Company moved from Edgware to Hatfield in 1934 and was situated west of the Barnet By-Pass about a mile west of Hatfield railway station. The modern industrial town had grown up in the area between, mainly in the years 1934 to 1939. The number of employees had increased from about one thousand in 1934 to over four thousand in 1939, and reached over ten thousand in 1959. Although Hatfield grew quickly in these pre-war years, it was impossible to accommodate all the workers and they mostly lived in St. Albans, Welwyn Garden City, Edgware and London. Other factories were also built in the vicinity mainly in a triangular area north of the town, and these include the engineering firm of Jack Olding, Ltd. employing about a thousand.

The chaotic growth of the six pre-war years was adversely criticised by Abercrombie in the Greater London Plan. It will be remembered that in that book he gave examples of more detailed planning as illustrations of pursuing the aims of the general plan. He chose the example of Ongar (Essex) for a new town, and Hatfield for an expanded town, entitling it the 'Integration and Extension of a Rural Industrial Town', and his suggestions were obviously of value to the planner appointed by the development corporation. Abercrombie criticised the pre-war siting of the factories at Hatfield 'scattered' as he said, 'in open fields with no attempt to form a single industrial area, and congesting the by-pass with their workpeople and traffic (at the very point where it carries the orbital as well as the Great North Road)'.

He felt that 'the confused medley of housing' was hardly less serious. He speaks of the general tendency to keep all new development as far as possible from the old town and Hatfield House; and this, he suggests, 'may be one of the reasons why the land immediately adjoining the by-pass and the aerodrome, which should at all costs have been left open, has been built up.' Abercrombie also remarks that 'the opportunity to establish a centre for the new town and to plan the housing in well defined units has not been realised.'

OUTLINE PLAN

The task of the Hon. Lionel Brett, who was appointed to prepare a master plan for Hatfield, was, therefore, very different from that of Louis de Soissons, who merely had to continue in more detail his original plan of Welwyn. It must be acknowledged that Mr. Brett has performed his difficult task well. This was a totally different problem from the planning of Crawley or Harlow where the proportionately small



- (a) Hilltop, neighbourhood centre of South Hatfield. On the other side of this paved court opposite the shops is a combined public house, community centre, and health centre.
- (b) Part of Roe Green neighbourhood centre with bronze sculpture of boys wrestling.
- (c) Housing in the south Hatfield neighbourhood with echelon arrangement.

Plate 40.
Hatfield.





(a) Houses in Garden Avenue where some fine existing trees have been preserved. Architect: William Crabtree.



(b) Blocks of flats at Feather Dell seen in relation to trees and lawns.

Plate 41.
Hatfield.

(c) Terrace housing at Sycamore Avenue. Architects: Sir Basil Spence, O.M. and Partners.





(a) Semi-detached houses built for sale at Roe Green.
Architects: Lionel Brett and Kenneth Boyd.



(b) Terrace housing sited round lawns and footways at
South Hatfield. Architect: Kenneth Boyd.

Plate 42.
Hatfield.

(c) Terrace housing at Garden Avenue. Architects: Lionel
Brett, Kenneth Boyd and William Crabtree.



HATFIELD

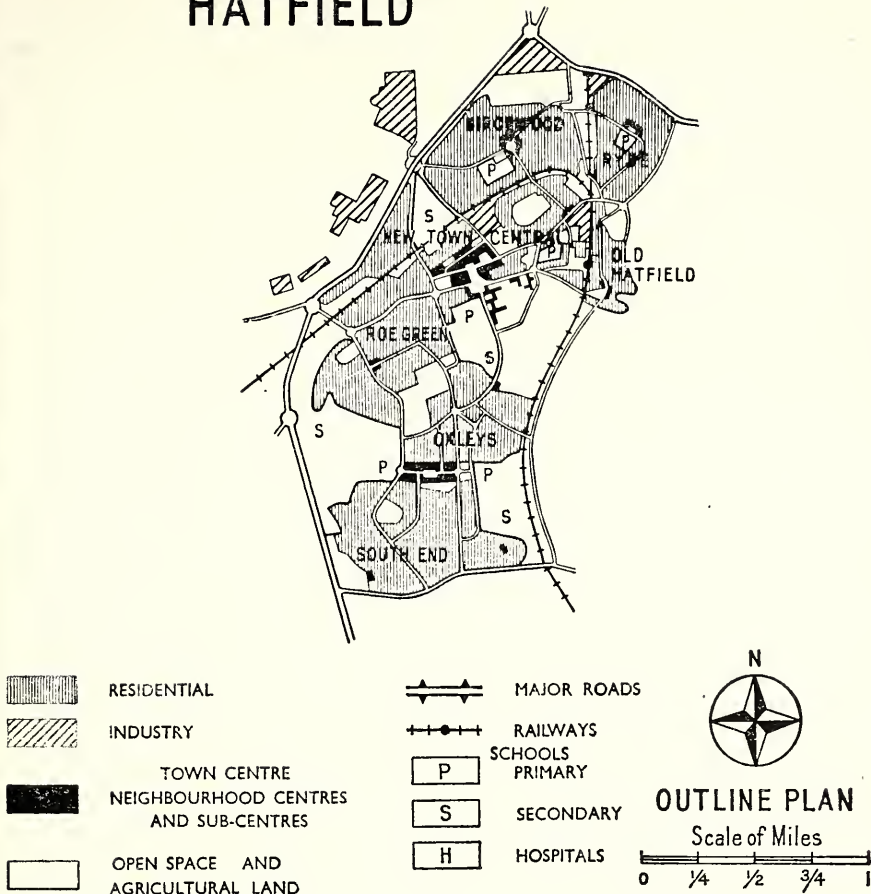


FIG. 42

existing development could be absorbed fairly simply into a new plan; instead there was much unrelated scattered development which amounted to nearly two-fifths of the calculated maximum.

In Mr. Brett's plan the town is divided into seven units or neighbourhoods of very varying shapes and sizes. There is Old Hatfield east of the railway, planned to have a slight reduction of population to about a thousand with a small extension northward. The Great North Road runs through the centre of this, but it is proposed to divert this road at the southern end of the town so that there shall be no major road barrier between the new town and Hatfield Park now open for the enjoyment of the public.

Ryde is a small neighbourhood of 1,800 to the east of the railway and north of Old Hatfield, planned for a fair proportion of private housing for owner occupiers. Birchwood, which was already mainly built just before and after the 1939-45 war by the Hatfield Rural District Council, is a larger neighbourhood with a population of some 4,000 in the north-

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ern part, bounded by the railway that runs to St. Albans on the south, the Barnet By-Pass to the west and a strip of industrial area along the railway on the east. Newtown, in the central area, includes some of the existing western extensions of Old Hatfield, and the town centre, and is planned for a population of 5,000. To the south-west is Roe Green with a population of 4,500 with an open space—the town's park—to the east; to the south-east is Oxlease with a population of 3,500, and the large technical college and school with extensive grounds to the west; and then in the southern extremity is South Hatfield with a population of 5,000. A generous and well distributed provision of schools: infant, junior and secondary, is made in the plan.

As can be imagined, industry presents the most difficult problem. There is the De Havilland Aircraft factory on the west of the Barnet By-Pass with 10,000 employees, while other factories to the north represent another 15,000 workers, which alone means a town of 25,000 to 30,000 if all these workers lived in it. It is also very much a one-industry town which is unsatisfactory for stability of employment. Desirable diversification of industry can thus only be secured by overloading the town with industry, and a dependence on a considerable proportion of the workers living elsewhere. Nevertheless some attempt is made in the plan to provide this diversification, including a greater provision for female labour, and space for additional industry is thus provided near the town centre and in the south both in a separate zone and near the neighbourhood centre of South Hatfield. The plan was approved in principle by the Minister of Town and Country Planning in August 1950.

It was stated in the memorandum on the draft designation order that the industry and population which will provide the expansion for Hatfield are to be drawn from London. But it is obvious that there was already more than enough industry in Hatfield for its planned maximum population of 25,000. Hatfield, therefore, is hardly an example of a new town to accommodate dispersed industry from London, but rather a new town to house mainly an existing working population, of which however many are being dispersed from homes in London and thereby saved from daily travel.

BUILDING THE TOWN

Of the seven neighbourhoods, Old Hatfield, Birchwood, and a proportion of Newtown had already been built; the remaining four had to be built from scratch. Shortly after the master plan was approved a start was made on Roe Green in the centre of the area. This was completed in 1957. In 1954 a start was made with South Hatfield at the southern extremity of the town of which the districts of Hazelgrove and Angerland were completed in 1959, while Oxlease, which lies between the two, was commenced in 1956, and completed in 1961. The building of Ryde in the north will complete the town probably by 1963. The town centre was nearing completion by the end of 1959, while the



FIG. 43—Part of Roe Green neighbourhood showing centre and housing layout.

factories in the Birchwood industrial estate to provide mainly female employment had all been built.

Housing has not progressed as fast as in many of the new towns which is perhaps regrettable in view of the needs of the factory workers in the area. Delay was caused by the Colne Valley Trunk Sewer not being completed until the end of 1954, and building could not commence in South Hatfield until connections into it could be made. A similar delay was caused at Oxlease served by the Batterdale sewer which was not completed until 1957. Up to the end of 1954 a little over one thousand houses had been completed; the rate of production improved considerably up to 1956, declined in 1957-59 due, no doubt, to the restrictions on capital expenditure during those years. A rough idea can be obtained from the approximate figures, which were nearly 400 in 1955, about 850 in 1956, a little over 400 in 1957, about 100 in 1958, about 150 in 1959, 390 in 1960, 405 in 1961, and 198 in 1962 so that 4,484 were completed by the end of that year of which 3,307 were built by the development corporation.

HOUSING AND RESIDENTIAL AREAS

As with Welwyn Garden City the housing is grouped by the development corporation under the three headings of weekly rented, monthly rented and those for sale, and the proportions, which are fairly evenly distributed in each of the new neighbourhoods, were, in the spring of 1960, 2,037 weekly rented, 292 monthly rented and 168 for sale by private enterprise on plots made available on 999 year leases. The houses for sale are mainly detached while the others are either semi-detached or terrace houses.

The hilly character of the southern end of the new town provides opportunities for some interesting housing layouts in the three neighbourhoods situated there, namely Roe Green, Oxlease and South Hatfield, and the architects have used their opportunities well. Much of the housing has an architectural distinction which it is not easy to give to small units and which makes it particularly noteworthy. In Roe Green, with the more conventional brick houses, are several where low-pitched gable ends appear on the front of the house with the upper storey faced with cedar boarding and the effect is very attractive. Several houses in all the three neighbourhoods are arranged in echelon fashion either singly or in rows of two, three or four, thus providing varied shaped lawns in front of the houses.

In the Hazelgrove area of South Hatfield which lies mainly to the west of the neighbourhood centre of Hilltop, the layout and design of the houses is interesting and original. Culs-de-sac are freely used, and these are mixed with footpaths through lawns between rows of houses. In many of these, by Mr. Kenneth Boyd, one senses the application of Georgian character to long terraces of small units in rather a distinctive manner. Broad eaves of flat or slightly tilted roofs overhang plain brick or rendered walls, with windows strongly framed in white, with simple



FIG. 44—Hatfield—the Harelgrove district of South Hatfield completed in 1959. Note the long curved terrace blocks which in the hilly ground provide some interesting effects. The neighbourhood centre with the long curved row of shops facing a spacious pedestrian area with a combined public house and health centre opposite, is on the right of the plan.

canopied entrances. The long terraces run in curves which give a pleasant effect and certainly avoid the monotony sometimes characterising terrace blocks.

In Oxlease there is a very attractive group of houses by Sir Basil Spence. Some are designed in short rows of four grouped at different angles to give variety and to provide spacious lawns in front. There is a refinement in the design of these houses which puts them among the most distinctive examples of domestic architecture in the new towns.

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They are mainly of brick, and in a row of four houses three have pale straw-coloured bricks, and the fourth—one of the middle ones—dull purple bricks. In one row the upper storey is faced with red tiles with semi-circles downwards. All have first floor balconies, with elegant curved railings, while the introduction of timber boarding near the entrances provides another effective touch.

In South Hatfield are several detached houses faced with dark timber boarding, and linked with their neighbours by garages, and these provide a further example of refined design applied to the small unit. Some of the best domestic architecture of the smaller kind during the fifties is to be found at Hatfield. In some cases, however, the density is too high, gardens too small, forecourts too shallow for privacy, and roads too narrow for modern traffic conditions. These are serious offsets to the architectural achievement.

NEIGHBOURHOOD CENTRES

By the end of 1959 two neighbourhood centres had been completed; that at Roe Green, and the other at South Hatfield. The former, being fairly near to the town centre and to the shops in St. Albans Road, is rather small, but it is a very attractively arranged compact centre on the slope of a hill. It lies on an island site and consists of a row of five shops with a paved area in front and a service way with garages behind. To the south, up the hill, one mounts to another paved area on one side of which is a meeting hall and assembly rooms, while on the other side, shut off a bit, is the 'Cavendish' public house. In the space at one end of this hall is a sculpture in bronze of boys wrestling.

Hilltop, which is the name of the neighbourhood centre on top of the hill at South Hatfield, is a particularly felicitous design. On the east side is a curved row, concave in front, of nineteen shops in part of which is a broad paved pedestrian area. In the centre opposite this is a combined public house, community centre and health centre, which is a large building representing an experiment in combining these three purposes. It includes an assembly hall with stage, committee rooms and facilities for the health service. At the north end of this neighbourhood centre is a 4-storey block of flats, with car park between the two. At the south end is a church of modern and arresting design, and beyond is the parsonage; while between the church and Bishops Rise is a lawn with trees, altogether a very pleasant centre indeed.

TOWN CENTRE

In the report of the Hatfield Development Corporation on the progress and position of the plan prepared by Lionel Brett, it is stated in the note on the town centre that 'Hatfield started its life as a new town with the advantage of having, albeit a small one, an established shopping centre. The gain is economic, social and aesthetic. The centre can grow naturally out of what exists, and will avoid the suggestion of a "model community".' It is difficult to appreciate the advantage, and it is

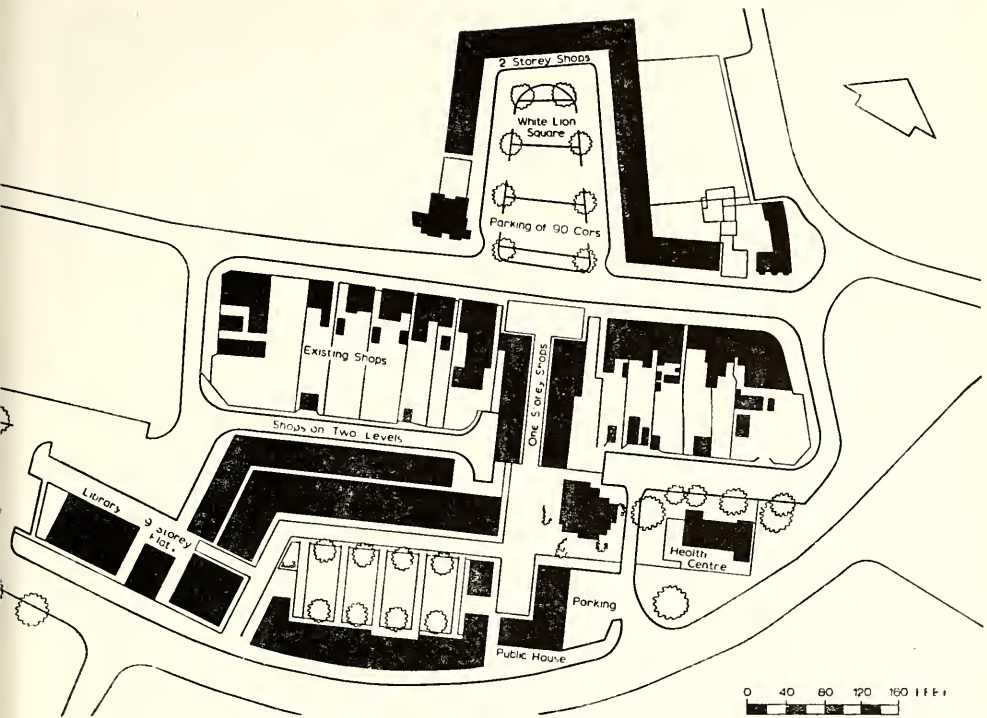


FIG. 45—Hatfield Town Centre.

difficult also to appreciate the social and aesthetic gain, while it may be asked why should one be afraid of a model community. On the contrary a disadvantage of the town centre is that it is part of an older shopping district where shops have grown haphazardly on either side of the road. The new plan consists of two squares, one north of St. Albans road with shops on three sides, and one south reached by a pedestrian way. The latter forms the market which is adjacent to Queensway, a main road running south of the centre.

That the centre is not more of a pedestrian precinct denies the advantages which have been indicated in the chapters on some of the other new towns. The circumstance that the old shopping centre is combined in the plan necessarily makes this more difficult, but it would have been much better if St. Albans road had been eliminated through the centre and had made a cul-de-sac to the west.¹ The traffic road round the north square should also be eliminated. Shoppers, especially mothers with young children, could then have done their shopping with the relaxed feeling that traffic roads render impossible.

INDUSTRIAL AREAS

As has been pointed out there was adequate industry in Hatfield at the time of designation to support the planned population, yet there was

¹This plan of the centre is the seventh that has been made. In earlier plans St. Albans road was changed to a pedestrian precinct, but local interests forced the revision of the plan.

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not a satisfactory diversification of industry, and it was felt by the development corporation that there was a need to provide additional industry in part to provide employment for female labour. Thus the corporation has built up to the end of 1959 eleven new factories in sizes varying from 2,500 square feet to 37,000 square feet, while two firms have built their own factories representing a further 25,000 square feet. This industrial development has taken place mainly in the Birchwood area to the north of the town. In the last few years very little building of this kind has taken place, and any future industrial development is reserved for the extension of existing factories.

SOCIAL ASPECT

Much that has been written of the social activities and problems of the other new towns has some application to Hatfield. Like the other new towns, it possesses its various clubs, societies and associations for cultural and recreational pursuits and its women's and youth organisations. The last named deserves some special mention. In 1950 a large house called 'The Breaks' with 8 acres of ground near the town centre was acquired by the development corporation, and was allocated for a youth centre formed in co-operation with the de Havilland Aircraft Co. and run by a public committee. A full time warden was appointed, whose salary is paid by de Havillands. By the early part of 1952 the centre was full to capacity and consisted of 160 boys and girls. Among the activities at the centre were drama, music, arts and crafts, various sports and indoor games. 'The Breaks' was also used by the corporation for welcoming parties for new residents (a task later taken over by the Cavendish Club), for a day-time old folks' club and for the 20-35 club. Later welcoming parties have been held at Cavendish Hall and 'Hilltop' as they are usually held as near as possible to the latest new residents.

It was inevitable that with the success of the youth centre the premises should prove to be inadequate for its activities. Early in 1954 there was a waiting list of 75 young people, and it is interesting to note that according to the 1954 Report of the development corporation 'the adolescents of every single family housed have joined or attempted to join this club.' The de Havilland Aircraft Company had already provided additional accommodation, but even with this the provisions were inadequate, and later the centre received the gift of a prefabricated building from the company which, according to the 1956 report, 'was being erected for the corporation by a firm of builders, which unfortunately went bankrupt.' The foundations were completed, however, and the boys and girls themselves undertook to continue the erection under supervision, and the appropriately named 'Enterprise Hall' with its 3,500 square feet was completed late in 1957. This very successful youth centre should itself be an inspiration to other new towns, and it is perhaps a pity that the Gulbenkian Committee, in studying the need for a youth centre at Stevenage, did not give some attention to this highly successful example at Hatfield. It has prompted

plans for another youth centre in South Hatfield where some old buildings of Downs Farm were converted and a new hall built in the same way by voluntary labour.

This community feeling of youth in Hatfield expressed in its highly successful youth centre is itself a reflection of the very strong community feeling that exists among the residents in the different neighbourhoods. The success may be due partly to the large industrial population that was already there when the new town began to be built, but it is also in no small measure due to the work of the development corporation in collaboration with industry.

Chapter XXI

GLENROTHES

BEFORE the second world war in the late thirties coal production in Lanarkshire provided nearly half of the total output in Scotland, but in the period immediately following the war this output was markedly falling and some of the seams were becoming exhausted. It was necessary, therefore, to make good this decline by increased production elsewhere, and the National Coal Board decided to expand production in the coalfields of Fife, Clackmannan and the Lothians. In East Fife at this time the annual output of coal averaged about 2 million tons, and it was planned to increase this to about 6½ million tons. About 6,500 miners were then employed in these collieries and with the planned increase in production it was estimated that there would be employment in the area for a further 6,500.

To make this plan workable in the best possible way it was necessary to house the miners satisfactorily, with a good home environment, and it was felt that this could best be done by building away from the collieries a mixed community, in the form of a new town in the vicinity. In the Memorandum by the Scottish Secretary of State on the Draft New Town (Glenrothes) Designation Order 1948 it is pointed out that 'the programme for increased coal production involving the employment of miners on this scale depends for its success on the provision of houses and other facilities for the miners and their families. Past experience has shown that purely mining settlements are basically wrong and prevent healthy community development. In its Report published in 1944 the Scottish Coalfields Committee recommended that miners should, wherever possible, be housed away from the collieries and should have the advantage of living in a mixed community side by side with members of other trades and occupations. This recommendation is now widely accepted and the Secretary of State considers that it should be adopted in providing the housing and other facilities required for the additional mining population in East Fife.' In a reasonably balanced mixed community the proportion of miners to other population was considered to be 1 in 8 or 1 in 9, and on this basis it was considered that the total population of the new community should be of the order of 30,000.

Although the town should be away from the collieries it was yet considered that it should be within reasonable distance of the main centres of mining. Also it should have a green belt, good road and rail communications, and be well situated for industrial development.

The site chosen was of 5,730 acres immediately north of the East Fife coalfield in the parishes of Markinch, Leslie and Kinglassie and the County of Fife. The river Leven flows west-east through the area, the main railway line from Edinburgh and Kirkcaldy to Aberdeen runs along the eastern boundary, while the A 911 road runs east-west through the town north of the river, and the A 92 runs south-north a little west of the eastern boundary. Of the 5,730 acres only 1,950 acres will form the built-up area of the town, the remainder will form the green belt to continue in agricultural use. Thus Glenrothes, like East Kilbride, but unlike the new towns in England, enjoys the advantage of a green belt controlled by the development corporation. The region is one of gentle wooded hills and valleys with the Lomond Hills to the north and the Goatmilk Hills to the west, and it can fairly be described as one of the most beautiful of the new town sites.

Since the plan was first prepared in 1952 for a population of 30,000, changes in the manpower estimates in the mining industry prompted a revision of the maximum population. In the report of the development corporation for 1956 reference is made to the changes in population estimates of the Department of Health for Scotland following the re-estimation by the National Coal Board of manpower requirements and 'as a result it had been agreed that a figure of 15,000 should be taken as a safe minimum for the population of the new town,' but that it 'was not likely to exceed 18,000.' This was very confusing and frustrating to the development corporation and it meant a considerable modification of the original planning intentions. The position improved however in the following year when the prospects of Glenrothes attracting industry were brightening, and a little later factories began to appear in the northern industrial estate. Communications and transport facilities would be greatly improved by the construction of the Forth Road Bridge, which would help to make industrialists more favourably disposed towards Glenrothes, and assist in establishing industry in the town. A further change took place in 1959 as a result of the informal approaches made by the development corporation to the City of Glasgow that it should receive overspill from that city. Negotiations were satisfactorily completed and it was agreed that 1,800 houses will be made available in Glenrothes for Glasgow overspill. The maximum population not merely returns to about 30,000, but it is possible that because of higher densities than were originally planned the town could accommodate a population of 50,000, especially as the Secretary of State has said that 'in the future Glenrothes can make an increasingly significant contribution to the serious problem of Glasgow overspill.' Much depends, of course, on the amount of industry that can be persuaded to go to Glenrothes from Glasgow. In view of the closing of the Glenrothes colliery announced in 1961 Glenrothes will have to depend for its future to a greater extent on this overspill.

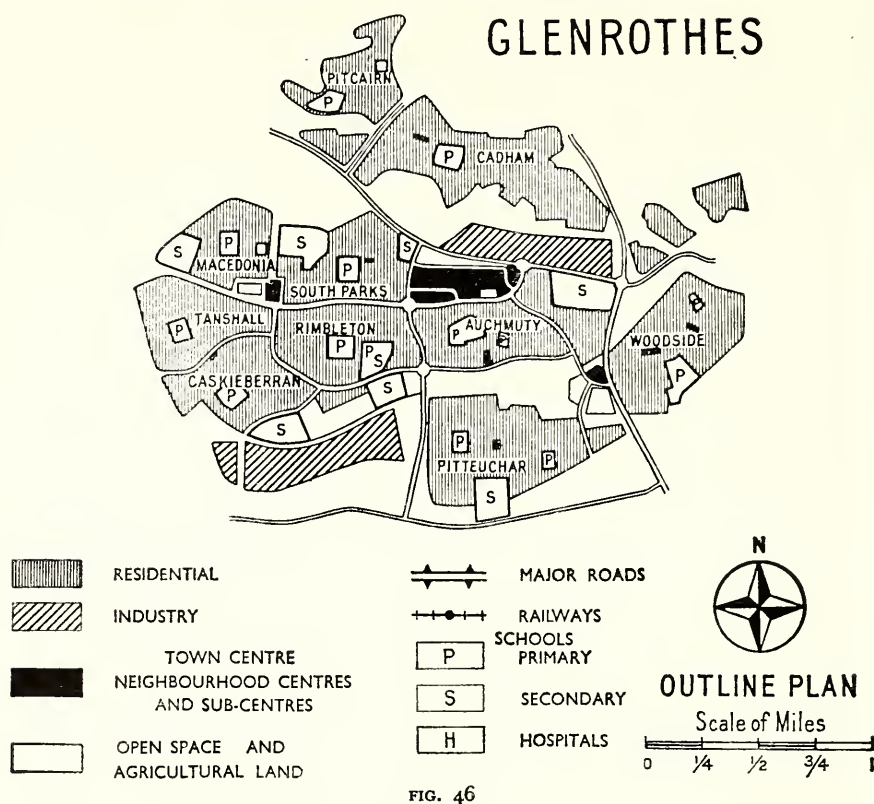


FIG. 46

OUTLINE PLAN

The burgh of Markinch just outside the eastern boundary of the designated area, and that of Leslie just beyond the western boundary, are $2\frac{1}{2}$ miles apart, and both are situated on the A 911 road, and it is between these villages that Glenrothes is being built. There have been several changes in the outline plan since it was published in 1952. There is little point in stating what these changes have been, especially as one of the principal reasons for them has already been indicated; it is better to base the description on the revised plan of May 1959.

The plan is divided into three neighbourhoods grouped round the town centre, that to the south-east, the western neighbourhood and that to the north. Each neighbourhood is sub-divided into precincts, with a primary school and a shopping area as nearly as possible in its centre. The south-east neighbourhood has three precincts, Woodside, Auchmuty and Pitteuchar; the western neighbourhood has five: South Parks, Rumbleton, Macedonia, Tanshall and Caskieberran; while the north neighbourhood has two: Cadham and Pitcairn, but here the areas of two further precincts are indicated.

The population of the south-eastern neighbourhood will probably be in the region of 10,000, and that of the western neighbourhood about 21,000. In the earlier plan of 1952 this neighbourhood had three

precincts, but it has been replanned at a higher density to include five. An influencing factor was the need to reserve greater areas of land for industrial development. The neighbourhood is 745 acres, and the density proposed for its population of 21,000 is 14·5 dwellings per net acre. It is clear from this planning that if building proceeds according to programme the original maximum population will be reached by the completion of the south-eastern and western neighbourhoods, and that building in the northern neighbourhood will all be in excess of that.

There was some existing industry to the north, and between this and the town centre is a new industrial area, while a further larger industrial area is provided in the south. The principal town roads run between the precincts and link with the town centre which is encircled by a road. There is a generous provision of open spaces, especially in the form of woods, which includes a woodland belt along the north side of the western neighbourhood.

BUILDING THE TOWN

Because of the uncertainty with regard to the number of miners who would require to be housed in Glenrothes and because of the reduction in estimates of this number, the progress in building the town was slow in the early years. Many housing contracts were suspended, and the corporation had continually to ask the Minister of State for Scotland to authorise more new house building. Latterly, however, owing to the fillip given by its becoming a reception area for the overspill from Glasgow more rapid progress has been made. The first few houses were built in 1951, then until 1957 about 300 houses were built a year, in 1958 about 420 were completed, 376 in 1959, 338 in 1960, 290 in 1961, and 346 in 1962 by the end of which year 3,839 dwellings had been provided of which about 3,507 had been built by the development corporation and most of the remainder by the local authority.

The first precincts to be built were Woodside and Auchmuty which lie in the south eastern neighbourhood. The former with its 990 dwellings including some 300 built by the Fife County Council was completed in 1955 and the latter with its 1577 dwellings in 1957. In that year building commenced in Rumbleton and a year later in South Parks, the two inner precincts of the western neighbourhood, in conformity with the general programme of building from the town centre outwards.

By 1962 the building of the town centre had hardly kept pace with the housing, and industrial buildings at first lagged behind. The corporation in the early years had difficulty in attracting industry to the town. In its report for 1956 it stated that it thought that the elusive first project had been secured, but this had to be deferred because of organisational difficulties of the enquiring company. A year later, however, a start was made with the erection of a creamery for the Scottish Milk Marketing Board, and by 1960 seven factories had been built in the Queensway Estate north of the town centre.

HOUSING AND RESIDENTIAL AREAS

Glenrothes differs from the English new towns in the comparatively large number of flats that have been provided. Of the 990 dwellings in Woodside 77 are flats, and of the 1,577 in Auchmuty 494 are flats, together making 22 per cent, but for Auchmuty alone about 30 per cent. A high proportion of flats is being maintained in the western neighbourhood.

The reasons given for this would doubtless be compactness of urban development and conservation of land. It could hardly be that it is an acceptable form of dwelling for so high a proportion, because there is overwhelming evidence to the contrary. Possibly the reason really has its roots in tradition. In Scotland a higher proportion of flats has always been provided than in England, and this can be traced to the stronger continental influence in Scotland. On the continent city defensive walls were maintained much later than in England, and as populations increased, congestion became more acute within the city walls, so vertical extension in the form of high apartment blocks became the custom, whereas in England the growing population was accommodated more by horizontal extension in ever-increasing suburbs. Scotland, so susceptible to French influence, imitated the continental apartment block to a far greater extent than ever obtained in England, and the tradition has not yet died and survives in two of its new towns. Still, it is interesting to note that in its 1960 report the development corporation states that: 'During the course of the year it became evident to the corporation that there was considerable resistance to the letting of flats or maisonettes and as a consequence an urgent review was made of the future programme from the point of view of the proportion of flats and maisonettes to houses in general. Future development in the West Neighbourhood had been proposed on a basis of 20% flats or maisonettes while in the existing Auchmuty Precinct the proportion of flats was 29% with provision for an ultimate figure of 36%.'

'After careful study the corporation came to the conclusion that for the time being the proportion of flats and maisonettes should be reduced to 10% in the town as a whole but that reserve sites should be kept throughout the town for a maximum of 16 $\frac{2}{3}$ % in the long run. The effect of this decision in practice has been to release certain sites originally reserved for flats for general use as housing sites or for reservation for such appropriate uses as the corporation may decide. It is evident, however, that there will be no need to build further flats for some considerable time as on the basis of the 10% figure, of which mention has been made, a balance of only 272 flats would be required in the whole of the town. It has been decided that approximately 200 of these will eventually be built in the town centre leaving a very small proportion to be constructed in other areas.'

It would seem therefore that the experience of the corporation has conclusively demonstrated that the great majority of families much prefer a house with a garden to a flat. The corporation is realistic in

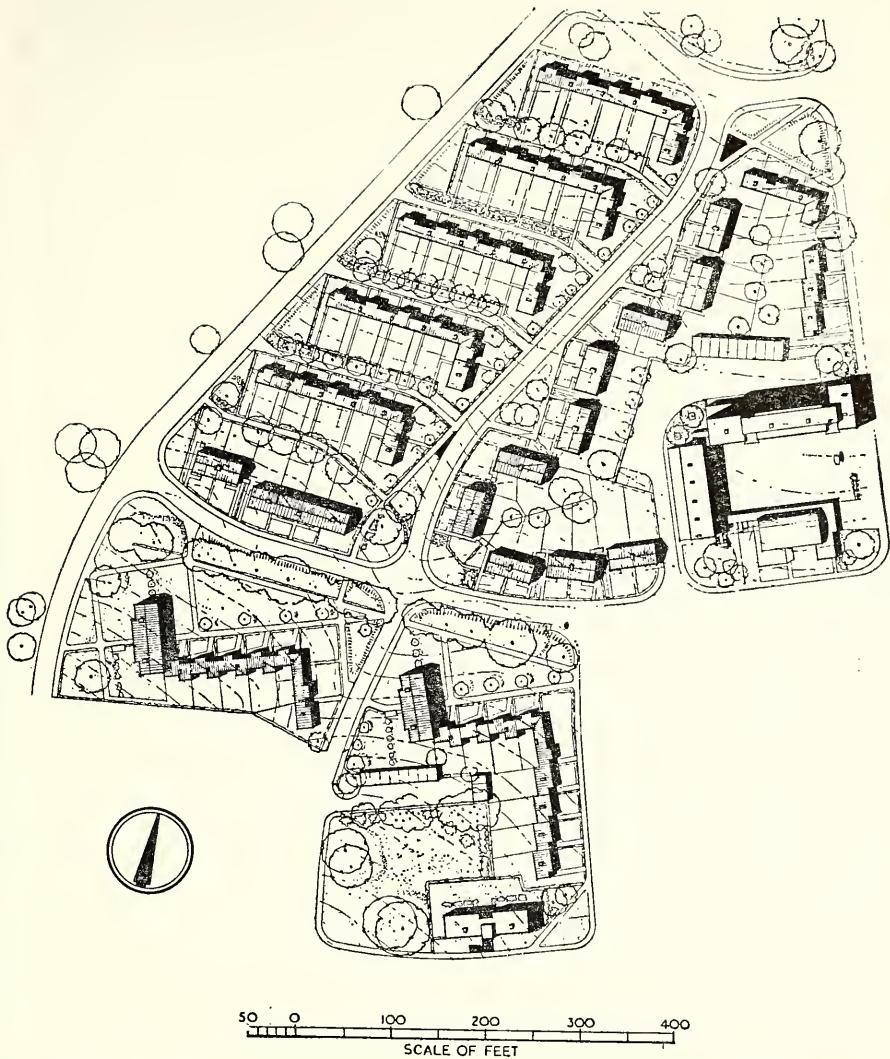


FIG. 47—Glenrothes—The Woodside precinct in the south-east neighbourhood completed in 1955.

modifying its plans in this respect, and is thus providing accommodation in accordance not only with the needs but with the wishes of families.

The flats are mainly in three-storey blocks in rows, and four-storey Y and star blocks (one of which in Auchmuty received a Saltire award in 1955). These blocks are often effectively sited in relation to the two-storey houses, and with the undulating land they serve to give variety, especially of height, and it must be admitted that they contribute visually to the residential areas. A certain number of four-storey blocks of maisonettes have been erected and the corporation appears to look favourably on this type of dwelling as it states in its 1958 report

that 'keen interest is being taken in this type of development which may prove one of the best forms of housing, having all the requirements of comfort, land conservation and urban character.' This, however, is hardly borne out by the later, 1960 report.

The numbers of dwellings provided according to size is based on the number of apartments. It was originally 10% 2-apartment, 23·7% 3-apartment, 57·6% 4-apartment and 8·1% 5-apartment, but this was later modified for the western neighbourhood to 3% 2-apartment, 40% 3-apartment, 49% 4-apartment, 6% 5-apartment and 2½% over-five-apartment. The number of apartments in each category gives some flexibility of use, for example, the four-apartment house could either be two living rooms, dining room and parlour, and two bedrooms, or one living room and three bedrooms.

Because of the undulating character of the site, and because of the varied types of houses and flats, combined with an irregular grouping, the residential areas are visually attractive. Two examples might be taken, one in the area near the main shopping centre in Woodside, and the other south-east of Auchmuty known as Dovecot Park. In one long rectangular site of the former, the two long sides are linked by pedestrian ways and the terrace houses face on to these with gardens backing on to the next pedestrian way, while the houses turn the corner towards one of the roads. Semi-detached houses are irregularly grouped on the plot opposite. Another grouping in The Beeches consists of a row of terrace houses with projecting entrance blocks, running at an angle to the road, abutting a three-storey block of flats running transversely, while a spacious lawn and flower beds grace the area thus partially enclosed and screened from the road by a row of beeches. This delightful effect is repeated with variations by similar arrangements in other parts.

In the layout at Dovecot Park rows of terrace houses face outwards on an irregularly shaped island site with a road brought into the centre of the island where garages are provided. In some of these central or rear areas are allotments in addition to gardens, while other spaces between the sites are occupied by lawns, trees and in one area a playground and kick-about space enclosed by trees. This planning may be derived in part from the Radburn principle, but it is only a partial adaptation of it as the houses all face on to roads, and it is a question whether there might not have been some improvement in the planning if these had sometimes become footpaths. Nevertheless, in the irregular grouping and the generous introduction of trees, the area is a very attractive one.

PRECINCT SHOPPING CENTRES

Of the shopping centres that are being provided in each of the precincts, one that has been completed in Woodside merits special attention because of its very attractive plan and disposition of buildings. It is situated at the corner of Woodside Way and The Beeches. Buildings are grouped on three sides enclosing a paved pedestrian square patterned



(a) Woodside centre. A paved pedestrian area is enclosed on three sides, shops with maisonettes and flats over on two sides and a community hall on the third.



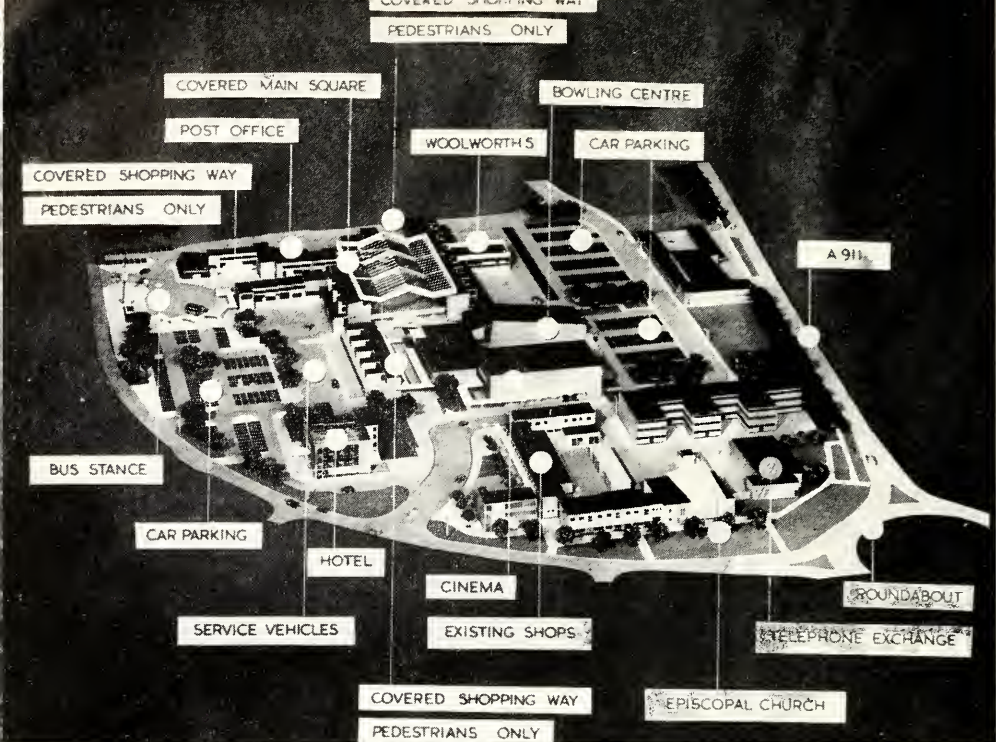
(b) Part of the Woodside neighbourhood with two storey houses and three storey flats sited round flower beds and lawns.

Plate 43.

Glenrothes.

(c) Terrace housing round a square of paths and lawns recessed from the road.

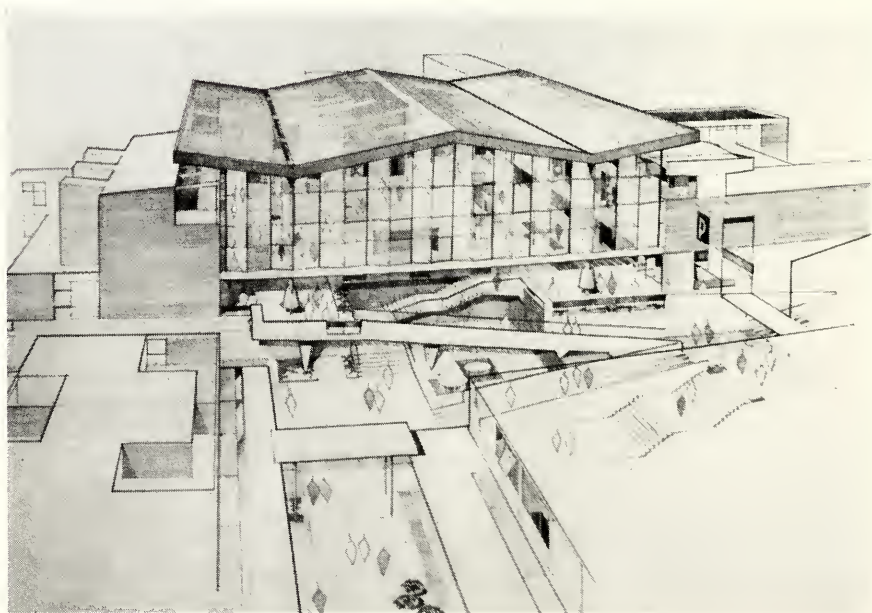




(a) Model of the eastern part of the town centre, which is being built first.

Plate 44.
Glenrothes.

- (b) Sketch of the central pedestrian square, which is on different levels and is covered with a glazed roof. Architect: Peter Tinto, chief architect to the development corporation.





(a) Carleton Primary School and playing field, Woodside,
Architect: Robert S. Lawrie (County Architect).

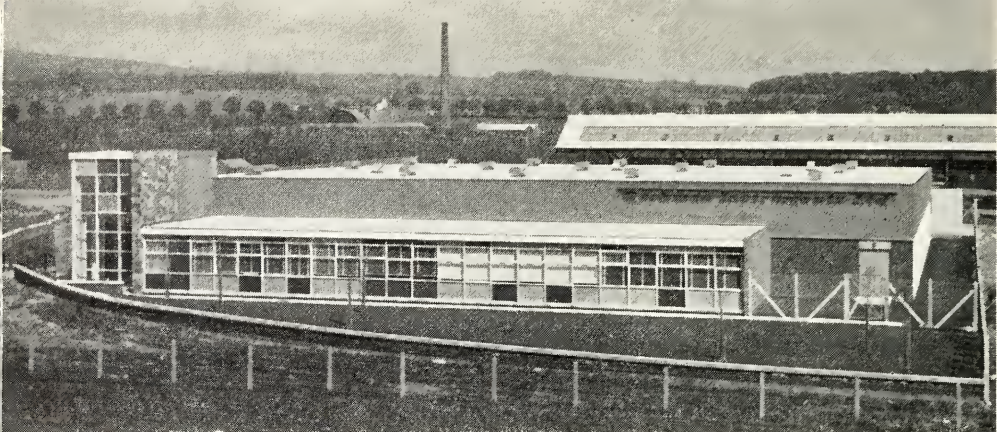


(b) Auchmuty Secondary School. Architect: Peter Tinto,
chief architect to the development corporation.

Plate 45.
Glenrothes.

(c) Roman Catholic Church, Warout Road. Architects:
Gillespie Kidd and Coia.





(a) Part of the Queensway Industrial Estate immediately north of the town centre which is occupied by seven factories. That in the foreground is of Beckman Industries, Ltd.

(b) Terrace housing at South Parks in the western neighbourhood.

Plate 46.
Glenrothes.

(c) One of the footpaths which traverse the town. These footpaths run from the outlying residential areas to the centre of the town.

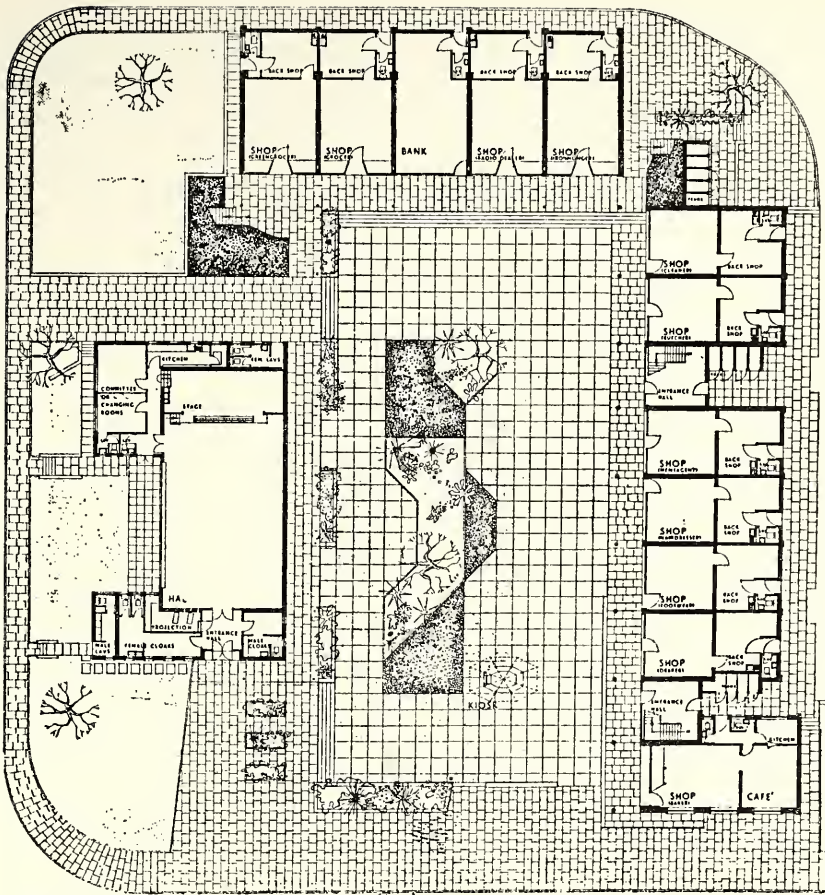


FIG. 48—Plan of the shopping centre at Woodside with a paved court enclosed on three sides. There is a protective arcading in front of the shops and a community hall on the south side (see Fig. 47).

with flower beds, and furnished with a newspaper and magazine kiosk. On the north side is a long row of shops in three-storey blocks, with flats above and projecting beyond the shops, thus forming protective arcading for shoppers; at the west end is a shorter row of shops with maisonettes over, and on the south side is a community hall to seat 240, which has an interesting barrel vault shell concrete roof. The paved courtyard connects with The Beeches by means of a short pedestrian way, and at the rear of the building is a parking area and garages. The buildings are well proportioned, their height is sufficient to give a sense of enclosure, the square is large enough to give an agreeable impression of space, while the flower beds give touches of colour and gaiety. The general effect is very pleasant.

THE TOWN CENTRE

Encircled by a major town road to which the other town roads radiate the town centre as planned is a long rectangular shape about

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half a mile east-west by a quarter of a mile north-south, spreading a little wider to the west. The plan has undergone several changes; originally it had a road running through the centre, but now the central part is a long pedestrian way running east-west which opens to a square in one part. Running off this central way in both directions are smaller ways which link with encircling roads within the main ring road. Along the principal pedestrian way are shops, two departmental stores, one on the south side and one at the east end. A group of civic buildings and offices is sited on the north side of this pedestrian way. They include municipal offices, police headquarters, central government offices, a civic theatre and restaurant, and a library, exhibition hall, museum and art gallery. At the west end is a technical college; a little away from this is a large recreational centre, and at the east end a cinema, bowling centre and an hotel; while public houses and churches appear at various places on the outskirts. All round these buildings, but within the periphery of the encircling town road, are spaces for car parks and garages. It is a plan that was probably influenced by the Stevenage centre, and it promises to be one of the best. The eastern half of the centre is being built first and by the end of 1962 was well on the way towards completion, the western part still being subject to alterations. One of the most notable features of the eastern part is the central pedestrian square completely covered with a glazed roof. It is about 180 feet long and 100 feet wide and there are different levels reached by ramps and stairways. This covered central shopping area is especially valuable in a northern town where the winter is cold with long rainy periods and snow.

INDUSTRIAL AREAS

Of the two industrial areas provided in the plan the Queensway Industrial Estate immediately north of the town centre is occupied by seven factories, which, with the spaces allowed for expansion, occupy a fair proportion of the area. These seven factories represent totally different industries for they are Beckman Industries Ltd., who make electronic components, Formica Ltd., who make plastics, Anderson Boyes & Co. Ltd., who make spare parts for coal cutting machinery, a creamery for the Scottish Milk Marketing Board, Checker Produce, a vegetable pre-packing firm, Hughes International (U.K.) Ltd., a subsidiary of the Hughes Aircraft Company, which makes semi-conductors, and Cassna Industrial Products Ltd., who make hydraulic components for tractor and allied agricultural machines. In the last few years these firms have greatly expanded. This variety is a good start in securing desirable diversification of industry. The factories so far built are long low structures on flattish ground.

SOCIAL ASPECT

The main original purpose of Glenrothes was to accommodate the miners working in the colliery to the south of the town, but, as we have noted, it was also the aim that Glenrothes should be a mixed community

so that miners could live with people in other industries, trades and professions; a proportion of about 1 miner to 8 others was the aim. With Glenrothes becoming an overspill town for Glasgow and with the closing of the colliery the non-mining population will be considerably bigger than was at first anticipated. There are the usual clubs and societies in Glenrothes and a community association which not only performs useful co-ordinating functions, but publishes a monthly magazine called the *Glenrothes Bulletin* which is not only widely read in the town but has a good circulation in surrounding districts. The town is fortunate in having so soon in its life a very good recreational centre in the north part of the town centre which though provided by the Coal Industry Social Welfare Organisation is open to everybody in the town. This centre includes a hall to seat 418, with adequate stage facilities, club rooms, an old persons' club room and facilities for the many cultural and recreational organisations of the town. It also has changing rooms for those using the bowling greens and tennis courts adjacent to the centre.

An example of the cultural groups in the town is the Glenrothes Art Club which has served to stimulate interest in the arts, and was specially mentioned for its good work in the 1959 and 1960 reports of the development corporation. Another example of local leisure activity was the building near the Woodside precinct of club premises for the British Legion largely by voluntary labour. Unfortunately burnt down soon after, these premises have now been rebuilt.

Chapter XXII

BASILDON

THE region north of the Thames estuary between London and Southend was, until the late nineteenth century, of a pleasant rural character. Then in consequence of the depression in agriculture at that time much of the land was sold by farmers to land development companies who resold in small plots for building, and many rather mean houses and shacks were built there. This process was much accelerated after the first world war by the popular movement towards the country. Along with dwellings for commuters to London and for retired people, houses and shacks were built as week-end cottages, and plots were taken for poultry farming. It became in many parts a scattered, unplanned bungaloid growth without proper services, drainage and roads. Among the regions where this was particularly apparent were those round Laindon and Pitsea and the district between.¹ Laindon is about 24 miles from the centre of London and Pitsea about 28 miles. These had become centres for the scattered development, and by 1939 each had a population of about eight thousand.

Sir Patrick Abercrombie had proposed in the Greater London Plan that Laindon should be increased in size to 17,500 and Pitsea to 17,000. Following this the Essex County Council and the South Essex Joint Planning Committee proposed a new town with a maximum population of 50,000. The proposal received support from the Billericay Urban District Council in whose area the two small 'towns' were situated, and from the County Boroughs of East and West Ham who were interested in a reception area for some of their overcrowded populations. As a result, in January 1949 the Minister designated an area of 7,818 acres for the new town. This large tract, the largest for a new town in England, is about 6 miles from east to west and 3 miles north to south. It comprises the small town of Laindon and the villages of Langdon Hills and Lee Chapel to the west, the small town of Pitsea, and the villages of Vange and Basildon in the east, the last giving its name to the new town. In all the population in 1949 was about 25,000. The country is gently undulating, fairly low in the south-east at Pitsea and Vange where, in some places, it is little above sea level, while to the south-west in the Langdon Hills district, there is a range of low hills rising to over 350 feet.

¹Sir Patrick Abercrombie in writing of Outdoor Recreation in Chapter 7 of Greater London Plan 1944 says 'It is possible to point with horror to the jumble of shacks and bungalows on the Langdon Hills and Pitsea. This is a narrow-minded appreciation of what was genuine a desire as created the group of lovely gardens and houses at Frensham and Bramshott.'

OUTLINE PLAN

Before progress could be made with the outline plan it was necessary to determine a maximum population for the town. The Advisory Committee on Greater London Planning had suggested 50,000. As the development corporation pointed out in its second annual report, this could have been achieved by increasing to urban density the scattered development of the two principal cores of population, Laindon and Pitsea, but this would have made two towns not one, with a thin line of development linking them, while it would have involved considerable lengths of major roads and services, excessive and uneconomic for a town of the proposed size. It was, therefore, decided to plan for a larger town with a population of about 80,000, and later it was decided that this maximum should be of the order of 106,000.

The outline plan was approved in August 1951. It has since been modified partly because of the increase in the maximum population.

The town centre, well placed geographically, is planned to serve not only the town but surrounding districts with a population of about 150,000 within an 8 mile radius. The proposed built-up area is divided into ten neighbourhoods: Pitsea to the extreme east with a population, that under revised proposals, may reach 14,200; Fryerns to the north east with 15,600; Barnstable east of the town centre (11,700); Vange in the south-east (12,650); Ghyllgrove immediately north of the centre (3,100); Kingswood south of the centre (4,900); Lee Chapel, North and South, immediately west of the centre (8,300 and 4,900); and lastly the two neighbourhoods in the west end, Laindon (19,700) and Laindon Hills (19,500). Each neighbourhood, besides its chief shopping centre, has smaller ones suitably placed. Large pockets of agricultural land on the urban outskirts, but within the designated area, form a partial green belt extending to about 40 per cent of the designated area. Primary and secondary schools are similarly distributed throughout the area. Industry occupies two large rectangular areas to the north separated from each other by about a mile. The railway runs east-west through the centre of the site, with Pitsea station at the east end and Laindon at the west end, and it is planned to build another station opposite the town centre. There are small areas of service industry near the town centre and at each station; ample open spaces and playing fields are spread fairly evenly throughout the town, and a large park containing a multi-sports centre is sited between the town centre and the western industrial area. The long shape of the town from east to west places some of the residential districts rather a long way from the centre. For example the eastern areas of Pitsea are $2\frac{1}{2}$ miles away, and the western areas of Laindon are a similar distance, but these disadvantages are caused, of course, by the pre-existence of these small towns. Whether it would have been better to have kept them as such with a separation of about a mile of green belt between the two, on the pattern of the twin towns of Welwyn Garden City and Hatfield is a matter on which there are good reasons on both sides.

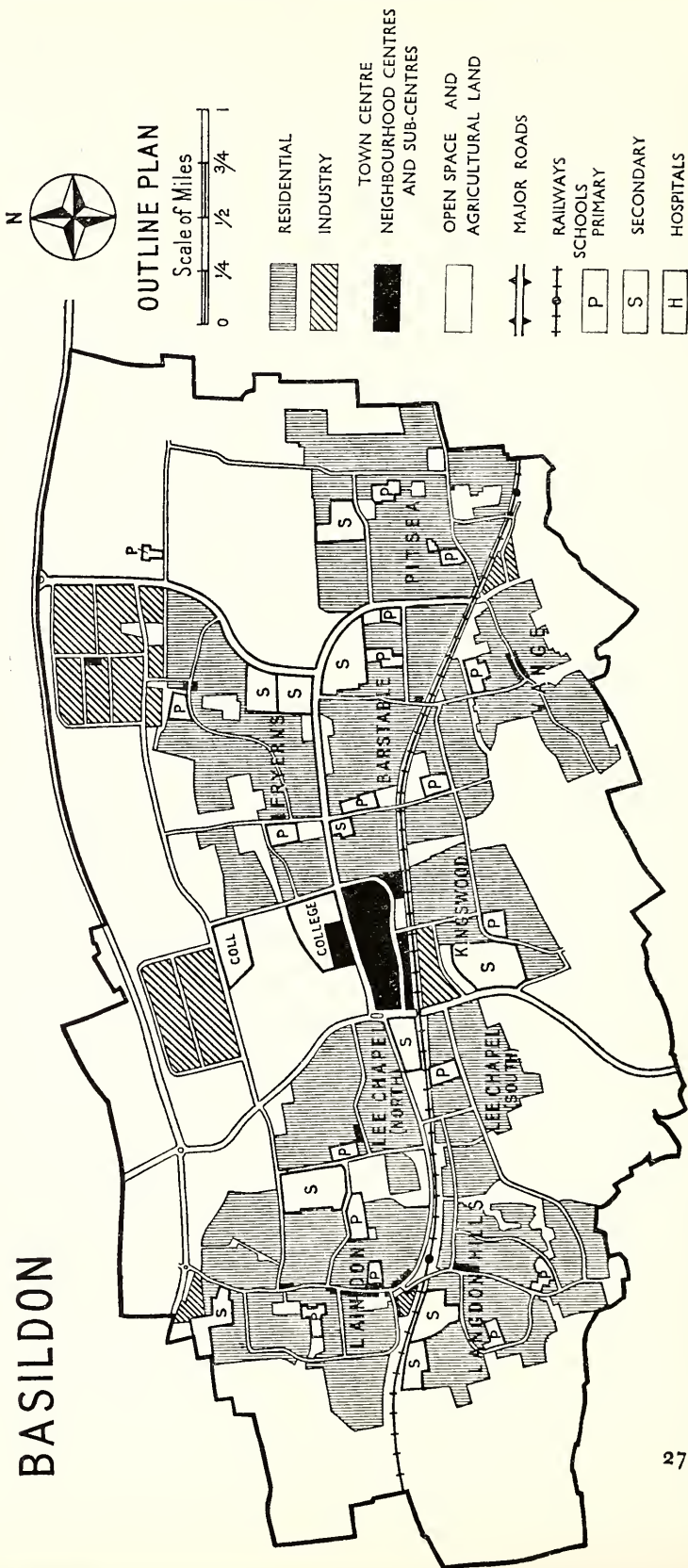


FIG. 49

BUILDING THE TOWN

There was no local opposition (as at Stevenage and Crawley) to the building of the new town of Basildon; instead, as previously indicated, the idea was sponsored and supported by the local authorities in the region. Being designated about two years after the first new towns, Basildon was unable to enjoy for the same number of years the benefit of low interest rate of the period following 1945, which enabled the first new towns to carry out large schemes of capital development financed at this low interest rate. Basildon was early caught in the rising tide of interest rates. Also the restrictions on capital expenditure in 1955 came when Basildon was in need of amenities for its growing population. There were other difficulties which served to delay progress, the principal of which has been perhaps the acquisition of land from so many different separate owners of small plots, each with its small house, or shack. This necessitated over 3,000 negotiations. For the most part the property was acquired by agreement, but in some cases powers of compulsory purchase had to be exercised, while in a few hundred cases it has not been possible to trace the owners. The development corporation took the wise precaution of acquiring the land well before it would be needed for development, sometimes as long as three years ahead. This was not, of course, possible in the early years. Another cause of delay in the early stages, both in housing and in the development of the industrial areas, was the inadequate sewerage. Work to provide adequate sewerage, however, was begun in 1952 and largely completed by 1955. The work was so well advanced by 1954 that progress was made with the industrial area, and housing began on a much bigger scale. The first house had been completed in June 1951, and up to the end of 1952 about 600 had been built. About 860 were completed in 1953, about 880 in 1954 and then from 1955 onwards well over a thousand were built each year, 1480 in 1955, about 1,350 in 1956, about the same number in 1957, 1,440 in 1958, about 1,070 in 1959, 1,428 in 1960, 1,243 in 1961 and 1,158 in 1962, by the end of which year 13,265 were completed. Of these 11,128 were built by the development corporation, 1,125 by the local authority, and 1,012 by private builders.

Building has proceeded mainly from east to west. The first two neighbourhoods to be completed were Fryerns to the north-east and Barstable to the east, and these were the principal scenes of operations from 1951 to 1956. In the latter year building began in Vange to the south-east, and in Kingswood immediately south of the town centre, while a start on a smaller scale was made in Lee Chapel South, and in 1958 Ghyllgrove, to the north of the town centre, was begun. By the end of 1961 Fryerns, Barstable, Kingswood, Lee Chapel South and Ghyllgrove were all completed, and Lee Chapel North was in progress. The remaining neighbourhoods, Pitsea, Vange, Laindon and Langdon Hills will probably be started in a few years time, and as the areas were already largely built up at the time of designation it will be mainly a matter of

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redevelopment. In 1956 a start was made with the town centre, which by the end of 1962 was about half built.

HOUSING AND RESIDENTIAL AREAS

As in the other new towns a wide variety of house types has been provided. The majority are three-bedroom and two-bedroom two-storey houses in terraces, but a small proportion of 4-bedroom houses, 2-bedroom maisonettes and one-bedroom flats and bungalows have

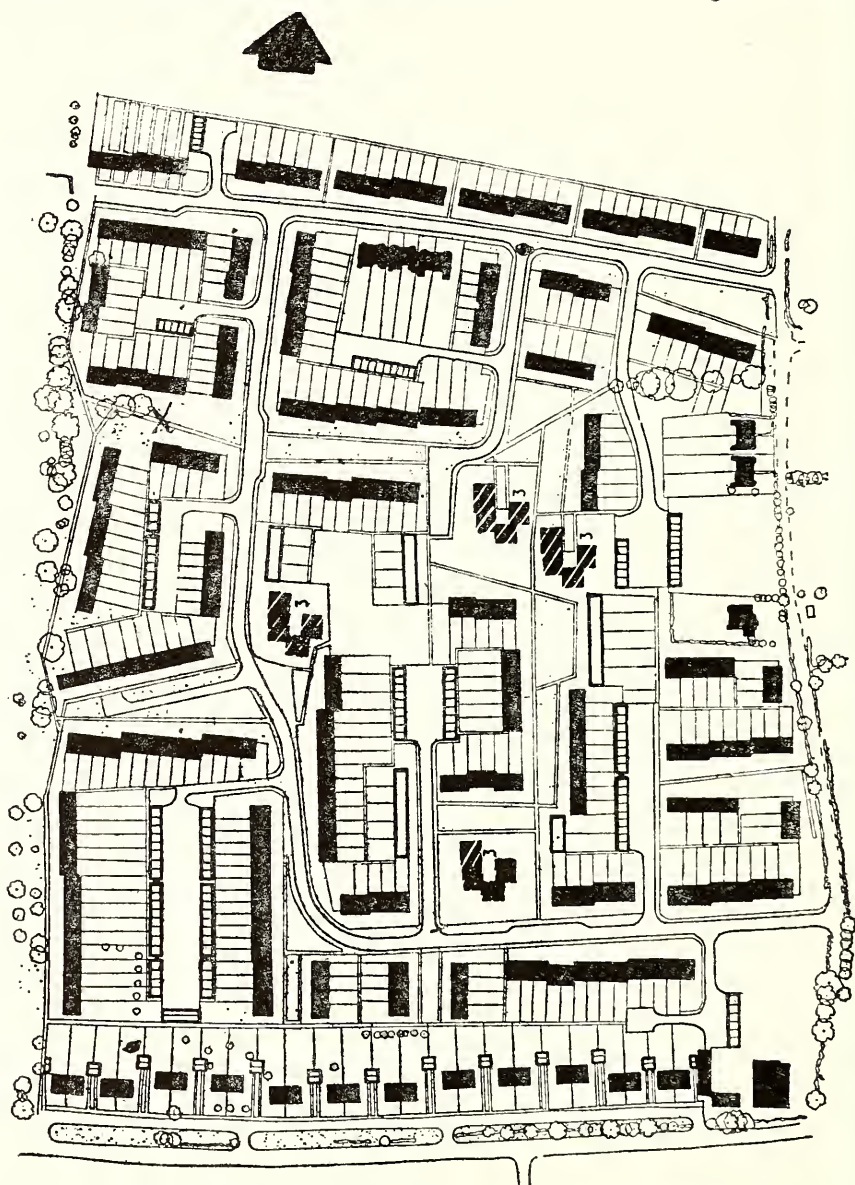


FIG. 50—Basildon—part of the Vange neighbourhood designed by Sir Basil Spence which incorporates vehicular rear access and footways in front of the houses.

been included. The proportion of flats is low but with the decision to raise the ultimate population of the town, the remaining residential areas will have somewhat higher densities which will be obtained in some measure by a greater proportion of flats. The two-storey flats and maisonettes have in some cases been built as corner or end houses of terrace blocks, while some tall blocks of flats are being built towards the town centre.

One of the problems in housing is to secure architectural variety. This cannot be done merely by varying the layout; it requires also variety in the design of the houses, especially of their elevations. The type most in demand, which constitutes the majority, is the two-storey house with garden, and if monotony is to be avoided it must be handled skilfully and imaginatively. Help is afforded by undulating rather than flat ground. It must be acknowledged that monotony has not been entirely avoided in the housing at Basildon. It has been aggravated perhaps by the considerable length of some of the terrace blocks, as at Clopton Green. A unit can be repeated so many times, say seven times, with good effect, but if repeated by double that number it is apt to become monotonous. How many times it can be repeated depends partly on the unit. A very well proportioned and interesting unit where the decorative content is high can be repeated more often than a simple rather dull unit.

To achieve variety some three-storey houses and flats have been built, while a wide variety of materials has been used in the elevations. One of the really successful rows of three-storey houses is the curved block of about twenty houses, with a block of flats at either end, in Long Riding in the Barstable neighbourhood. The elevations are made interesting by the projecting balconies on the first floor and the trellis and reeded timber panels of the entrances. The balconies, however, give no privacy, and a design of balcony with a degree of seclusion from neighbours, as is secured in many flat designs, would, we feel, have been an improvement.

Variety has also been obtained by the use of colour and texture in the elevations. A particularly good example is a row of four houses in 'Tangham Walk' in the Fryerns neighbourhood. Here the first floor is faced with timber boarding, and on either side of the window on the ground floor are vertical panels of cobblestones, with a plain cement-rendered dado beneath the window. The end and party walls project as brick piers. The whole effect is dependent on the artistic disposition of materials.

Earlier layouts such as those in the Fryerns neighbourhood follow very much the irregular patterns seen in most of the new towns, only here the cul-de-sac is not very much used. There is the irregular shaped island round which the houses are arranged, and the alingment of the houses often departs from that of the road so that lawns of varied shapes appear between. Sometimes a square, or a parking space, is taken into the island between the houses. The varied spacing between

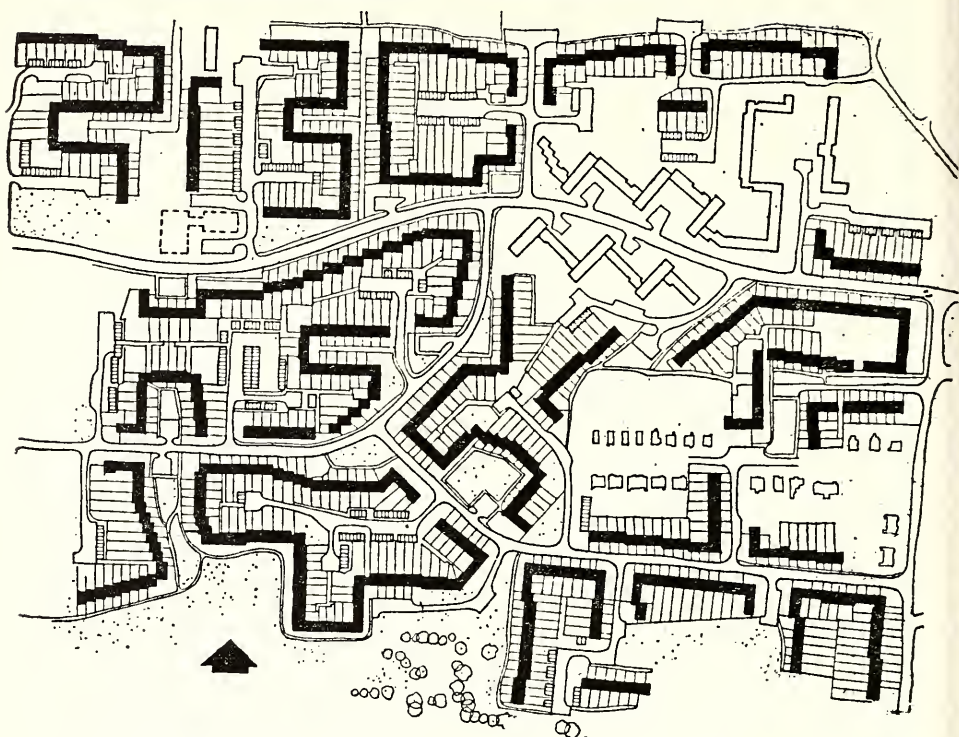


FIG. 51—Basildon—part of the Barstable neighbourhood designed by Anthony B. Davis, architect to the development corporation.

roads and houses and differently shaped lawns is very apparent if one takes a walk along the principal winding road of Fryerns neighbourhood. Here the green spaces sometimes narrow and sometimes broaden out almost to the size of a village green; and in this road one is not disturbed by the monotony of two-storey dwellings because the land is gently undulating and the course of the road is never flat.

In Basildon there has been a serious attempt to plan for the increasing use of motor vehicles. In the early stages about one garage to six houses was provided, but with the more widespread ownership of cars extending to the lower income groups this, in common with the other new towns, proved to be inadequate, and plans for residential areas since 1957 have provided one garage for every two houses. For future areas this proportion is proposed in the first phase, with the layouts so planned that provision of a garage for each house can be made as the demand arises.

More frequent traffic in residential areas has prompted the attempt in Basildon at some degree of segregation of pedestrians and motor vehicles, because, although the motor vehicle brings several benefits to its user, its presence in residential areas is attended with disadvantages. It brings an element of danger to pedestrians and especially children, while it is often noisy. Attempts at segregation have often been made

during this century, and probably the best-known plan for this so far evolved is the Radburn scheme. This has been an inspiration to the planners at Basildon, but it is important to add that it has by no means been completely followed.

To avoid a too prevalent confusion it is important to be quite clear about the principles of the Radburn plan. Radburn is a small suburban development in New Jersey, about sixteen miles from New York, which was originally planned in 1929 by Henry Wright and Clarence Stein with the assistance of, among others, the English planner, Sir Raymond Unwin. Radburn followed Wright's and Stein's experimental work at Sunnyside Gardens near Manhattan's business centre, and a major purpose of the plan was to provide complete separation of pedestrians and motor vehicles, and, to secure this, the plan provides footpaths and service lanes for direct access to buildings, independent of main through roads. These objectives are achieved by grouping houses on culs-de-sac or service lanes, each running off a principal road and giving direct access to the garages and backs of the houses, the fronts of which face the other way on the gardens and footways. The groups of houses in superblocks are placed in series and back on to a park. Roads are crossed by footway tunnels and bridges. Access to school playing fields or swimming pools from any house can be enjoyed by walking along the footpaths between the houses, and in the park separating the superblocks. Radburn was planned on a site of some 1,250 acres for a population of about 25,000 but the original plan was only partly carried out, its development being arrested partly by the depression of the early thirties. That it is a success is testified by the world-wide admiration that it is increasingly receiving as the best way so far evolved of segregating pedestrians and vehicular traffic, that the people who have lived there praise it, and that it has proved to be a very safe place. In twenty years there were only two fatal accidents, and these occurred on its main highways, while there was only one accident in an access lane that could be regarded as moderately serious.¹

In the housing layouts at Basildon only a very partial adaptation of the Radburn plan has been attempted. These adaptations have been made in the areas nearer the centre where the densities have been as high as 14 to 16 to the acre, whereas at Radburn the densities are not more than 6 to 9 to the acre. This higher density is clearly the reason for the very partial adaptation; for the segregation of pedestrians and motor traffic is nowhere in Basildon so complete as at Radburn, and where it has occurred it has been in comparatively small patches. The degrees of segregation is greatest at Barstable, designed by the development corporation's architect Anthony B. Davies, and at Vange, designed by Sir Basil Spence. In the former the cul-de-sac service roads branch into the spaces at the rear of the encircling terrace houses, with lines of garages at the ends of the gardens at an approximate ratio of one

¹A full account of Radburn is given by Clarence Stein in his book *Toward New Towns for America* (Chicago 1951) pp. 37-69.

garage to two houses. In a few places pedestrian ways are between the fronts of the houses, but as often the houses face the roads. In Sir Basil Spence's scheme at Vange the pedestrian areas are more extensive, and in parts there is the impression of houses situated among lawns untroubled by roads and traffic; but even here segregation is only partial. In Ghyllgrove a small-scale segregation has been made, and just south of Fryerns Shopping Centre is another example with a block of flats bridging the entrance to a courtyard of two-storey houses called Orsett End.

A further example in which the principle of houses backing on to an area served by a service road is adopted, is that in Kingswood, designed by William Crabtree, but here in only one small section do the houses face a pedestrian way; they mainly face the roads. It is, however, a layout with a good deal of variety, and includes a very pleasant arrangement of semi-detached houses with garages placed diagonally on to the road (Sparrows Herne) forming a series of triangular lawns. Partial as these segregations are compared with that at Radburn they must be welcomed as a move in the right direction, for they achieve some degree of precinctual seclusion from the motor vehicle. This will be increasingly appreciated as motor vehicles become increasingly numerous, powerful and dangerous. As the impression exists that Basildon has followed the Radburn method of planning, we should mention the differences, and indicate where the Basildon planning falls short of that at Radburn.¹

It is important to emphasise that the housing density of Radburn is only about half that at Basildon, a factor which contributes much to the agreeable character of the former. At Radburn the backs of the houses face on the service lanes, so that cars can be driven directly into the garage built into the house; and the gardens are in front of the houses; whereas the backs of the houses at Basildon are separated from the service lane and garages by the length of the gardens. The Basildon arrangement is not really so convenient either for the occupants or delivery of goods. Nevertheless Basildon is a brave attempt handicapped by too high a density, and it is to be hoped that it will lead to a more complete adoption in a British new town of the Radburn idea. It has been suggested that there is promise that this may occur in parts of Cumbernauld, but that town is being built at so high a density that segregation on the lines of the Radburn layout would be extremely difficult.

NEIGHBOURHOOD CENTRES

The larger of the neighbourhoods, with populations of ten thousand or more, have fairly big centres with one or two sub-centres. That at Fryerns is of a good size while there is a sub-centre towards the north-east of the neighbourhood. Barstable has a centre to the east of the neighbourhood, with a sub-centre between it and the town centre, while

¹We are assured, however, that in schemes for future development the aim is to secure the greatest possible segregation of pedestrians and vehicular traffic.

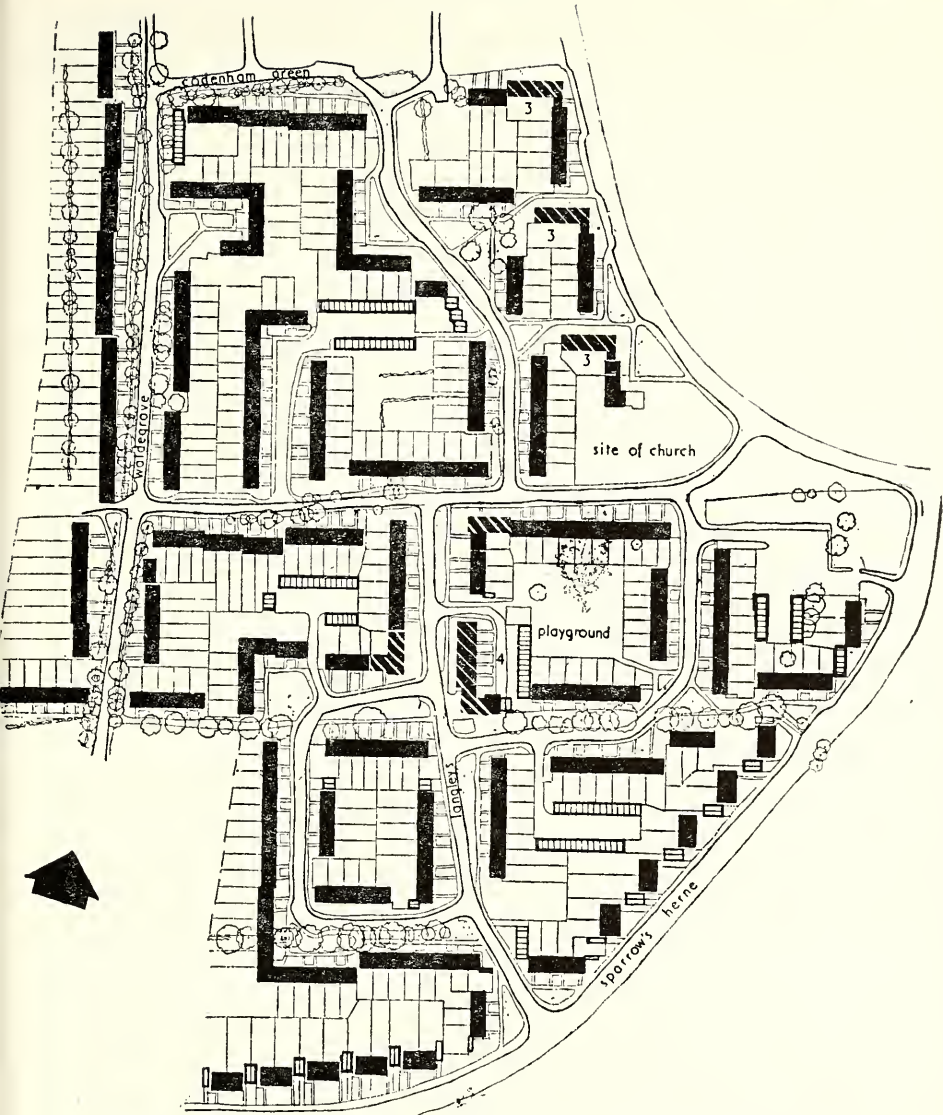


FIG. 52—Basildon—part of the Kingswood centre designed by William Crabtree.

Kingswood has a somewhat smaller one as it is not far from the town centre. Many of these neighbourhood centres have, in addition to shops either in a row or on two sides of a rectangle, a public house, church, and community centre, while a school either primary or secondary is nearby. One of the largest and most attractive is that at Fryerns which has some fifteen shops arranged on two sides of a square with a canopy linking the shops and giving protection from rain. The building on the east side is of two stories, and that on the north side of five stories, with balconied flats above the shops. The architectural composition of one low and one tall block is very successful. It is perhaps unfortunate that

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the public house and service industry which also form part of this centre are sited on the other—south—side of Whitmore Way, which is the main neighbourhood road.

The shops at both the Barstable and Kingswood centres are arranged in a row, the former one of twelve, elevated a little from the level of the road, and approached from a lower footway by steps and ramps. This upper footway is walled round, and is sheltered by a long canopy supported by slender columns. The walling changes at intervals from brick to slender iron railings, which also border the steps and ramps, giving a pleasing light effect. Above the shops two abutting blocks for dwellings rise to three and four stories, and again the architectural ensemble is effective. The few shops at the Kingswood centre are similarly canopied with one floor above, while at one end is a community hall lifted to the first floor on columns, and a covered space in front of the shops is thus formed.

TOWN CENTRE

Situated almost exactly in the middle of the town immediately north of the railway the town centre is, like that at Stevenage, distinguished by the arrangement of a considerable part as a pedestrian precinct. There is a large pedestrian square about 400 feet long by about 130 feet wide, approached by footways. Surrounding this are shops with offices over, while at the east end a tall block of flats provides a vertical mass. At the east end is a smaller square on a lower level, approached by a ramp and steps. To the south-east another small square, reached by a short pedestrian way, is flanked on two sides by an hotel and on the east side by a four-storey departmental store.

The central area is encircled by a road, and within this road and branching off from it and situated behind the buildings that face the

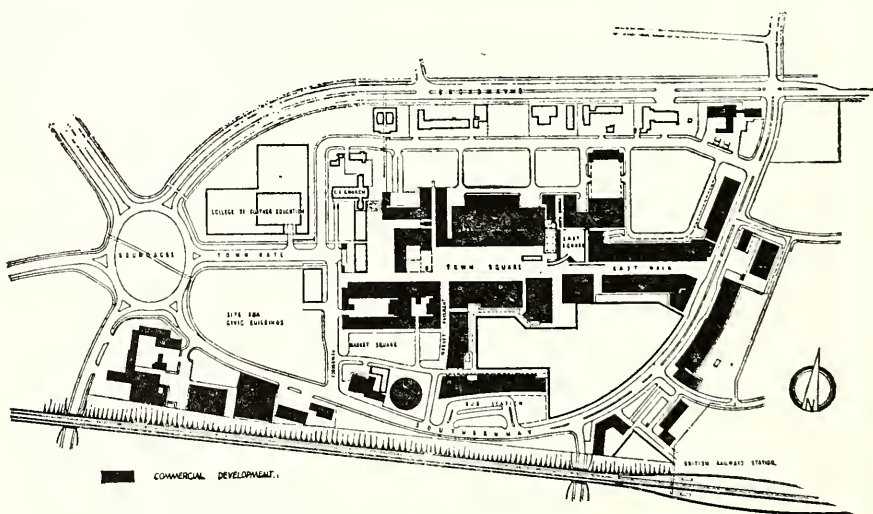


FIG. 53—Basildon Town Centre.

town square and the pedestrian ways are a series of car parks and service ways to the shops. It is thus similar in principle to some of the rear-access ways in the housing areas, with houses facing pedestrian ways.

In the north-east of the area within the encircling road is the site for the General Post Office, and on the northern edge of this encircling road to the north-west are sites for a group of County buildings—Fire station, Ambulance station, Health Clinic, Police station and Court-house; while in the south-west is both an open market and a site for a market hall. In the centre on the south side is a bus station, immediately opposite the railway; and a little to the east is the site for a new railway station, but the prospect of this materialising in the immediate future is not strong, although public opinion in the town is pressing for it. To the west is the town church, a site for a college of further education, and on the south-west island one for civic buildings which will presumably include a town hall, library and entertainment hall. A site for a cinema is provided to the east of the centre. A plot in the south-west adjoining the railway is allocated for service industry.

By the end of 1962 this centre was half built. When it is completed it promises to be one of the finest of all the town centres. The handsome main square, with its fine spatial composition and the discreet use of furniture, and the two smaller subordinate squares make a notable example of urban planning.

INDUSTRIAL AREAS

In the outline plan previously described there are two industrial areas on the north side of the town, and separated by about a mile. The eastern of these, the Nevenden industrial estate, was almost fully developed by the end of 1960, sixty-four factories having been built, representing a diversity of industries. Among the larger factories which align the London-Southend arterial road, are Ilford Ltd., Ford Motor Co. Ltd., Teleflex Products Ltd., Freedman Upholstering Co. Ltd., Carreras Ltd., and Marconi's Wireless and Telegraph Co. Ltd. occupying a large corner site. Other large factories on the south side of the site are York Shipley Ltd., The Ship Carter Co. of Great Britain Ltd., Bonallack & Sons Ltd., and W. J. Barter Ltd. On the east side of the southern half of Honywood Road is a group of medium-sized factories, many of which are for light engineering; while on the west side is a group of nursery factories formally sited round a broad court or cul-de-sac called Bowlers Croft. North of this is a small administrative centre which includes five shops, garages, public house, canteen, two banks and a petrol-filling station: this is a valuable amenity for those working on the estate.

Although in this industrial estate there may not be any outstanding examples of industrial architecture the buildings generally reach a good standard. Some of the office blocks, generally two-storey, in front of the factories facing the London-Southend road have a handsome appearance enhanced by the spacious layout in front, but more integration

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between these facing blocks and the factories behind would have contributed to the general architectural ensemble. Perhaps the chief visual impression is of a rather formal and spacious grouping of buildings.

The other industrial area immediately north of the town centre and town park began to be laid out much later. By the end of 1960 the roads and sewers had been laid, and during 1962 twenty nursery factories and two larger factories were under construction. Also the Standard Telephone Co. Ltd. are leasing a 20-acre site for factory premises to be built by the corporation and employment here will amount to 2,500.

A third industrial zone is to be developed on land between these two, as the corporation has agreed to make a 100-acre site available to the Ford Motor Company Limited, on which the company will erect a factory of about 1,000,000 sq. ft. The whole of the tractor producing plant at present operating at Dagenham, with 3,500 employees, will move into this factory.

These employees will, in the first instance, at least, continue to live in and around Dagenham, but in due course they should be absorbed into the community of the town. This development will create problems but it will also bring great benefits to Basildon, particularly in providing many of those additional opportunities for employment which the town's ultimate population—recently raised to 106,000—will need.

SOCIAL ASPECT

In the early days of Basildon there was, as in many other new towns, a serious lack of premises for social activities. In 1953-54 two small, temporary community halls were built, but that was all Basildon had for a population of about thirty thousand. The development corporation deplored the circumstance in its 1954 report. It was viewed as a matter of concern 'that in the five years of its existence it has not been able to secure more public meeting space for community centres than two halls, each of about 1,000 sq. ft. In fact, there is no building at all in the designated area (except schools) of 5,000 sq. ft. which is the minimum required for such social purposes as dances and other entertainments. The need for community halls is perhaps greater in Basildon than in other new towns, for our designated area contains an existing population, proportionate to the area, larger than that of any other. The demand for communal centres for recreation has therefore been insistent from the beginning'.

Progress in the provision of community halls continued to be slow. A third temporary structure, the Vange Community Hall, was built in 1955, and the circumstance that these first three halls were built largely by voluntary labour was testimony that they were very much wanted. Over 160 clubs and societies of all kinds were active, and it was obvious that the provision of premises was a matter of some urgency. The schools helped a little, but these were no substitute for an adequately sized fully equipped community centre. As the corporation remarked in its 1957



(a) Part of the large pedestrian central square with Brooke house, at the east end, in the background.

Plate 47.
Basildon.

(b) South side of the town centre leading from the bus station. The more distant part is a pedestrian way.





(a) Fryerns neighbourhood centre with fifteen shops on two sides of a square. A church, community centre and public house also form part of this centre.



(b) Shops with flats over, forming part of Barstable neighbourhood.

Plate 48.
Basildon.

(c) A crescent of shops on south side of the town centre. The upper wall beyond the projecting mass is faced with a ceramic mural.





(a) "Long riding" a street of three-storey development leading to the town centre.



(b) Short terrace of houses at Tangham Walk. Houses have the varied facing textures of weather boarding, cobble stones and brick.

Plate 49.
Basildon.

(c) Collingwood terrace in Vange neighbourhood, one of the earlier (1952) housing schemes.





(a) Terrace and semi-detached housing at Fryerns neighbourhood. Old trees have been preserved and new ones planted.

(b) Group of houses with suggestion of the village green.

(c) Pool with sculpture in the town centre.



Plate 51. Two views of the model of the redesigned town centre, made early in 1963 shortly after decision to increase size of the town. The centre is now mainly a pedestrian precinct encircled by road with car parks adjoining.

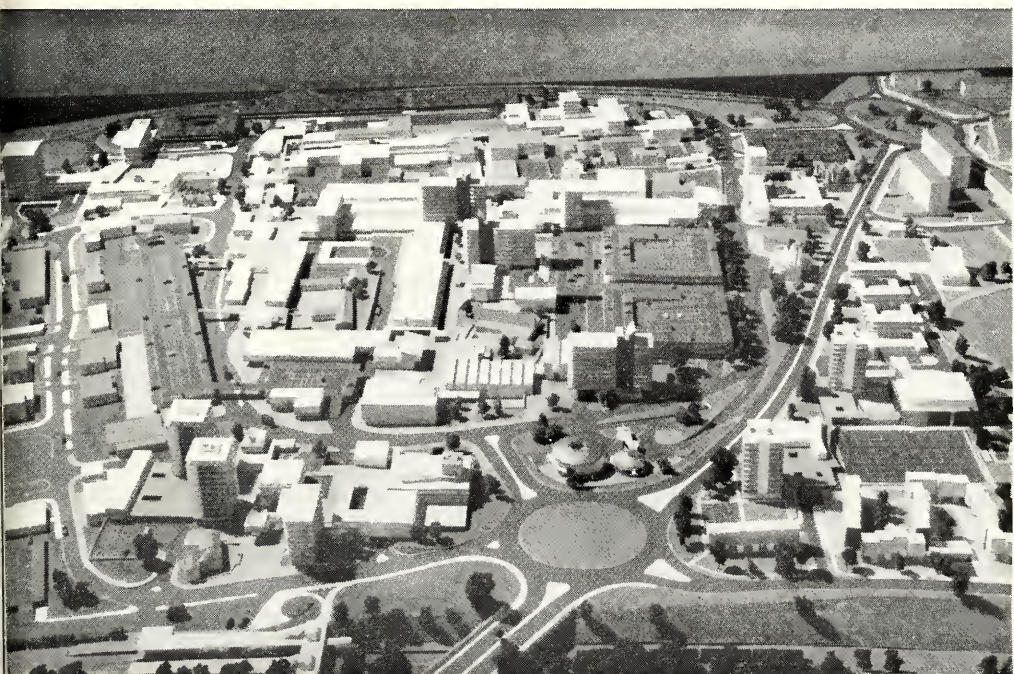




Plate 52.
Bracknell.

(a) A pedestrian way in the shopping centre linking High Street and Broadway, both of which will also become pedestrian ways under the new plan.



(b) Old People's dwellings in Shepherd's Lane.

(c) Priestwood square neighbourhood centre.





(a) A crescent of three storey terrace houses near the Easthampstead centre. Architect: E. A. Ferriby, development corporation architect.



(b) Terrace housing, lawns and old trees.

(c) Three storey flats in Windlesham Road.

Plate 53.
Bracknell.





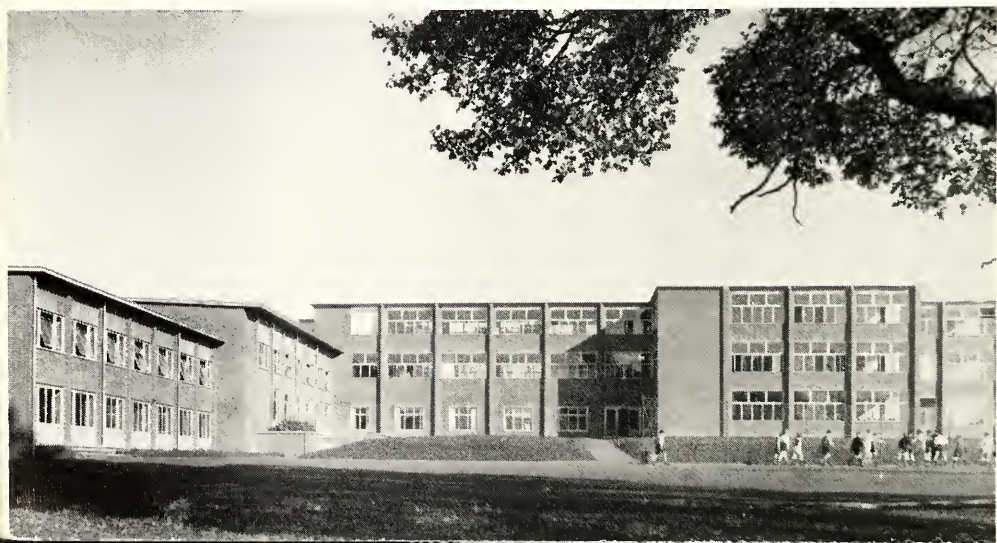
(a) Terrace housing in Priestwood Avenue.



Plate 54.
Bracknell.

(b) Crossway, shops and office block with sculpture panels by Trevor Tennant.

(c) Wick Hill Secondary Modern School, Northern Campus Site. Architect: J. T. Castle (Berkshire County Council).



report, virile organisations were 'making do' with unsatisfactory accommodation. It is incidentally evidence of some success in the social life of Basildon that it contained these virile social organisations.

In 1956 a large permanent community centre was planned for Fryerns, the largest and first to be built of the neighbourhoods, but work did not begin until late in 1958, and it was completed only in 1960. A community centre in Laindon was opened early in 1959, a small community hall in the Kingswood neighbourhood centre was opened at about the same time, while work on another such hall in the Lee Chapel South neighbourhood centre was started early in 1961. A large hall in the town centre has been adapted by Mecca Ltd. as a Dance Hall for 1,000 persons, and is now making a valuable contribution to the social life of the town, and a bowling alley is to be erected very shortly on a nearby site. Provision, therefore, of premises for social activities had greatly improved by 1961. The history of their provision suggests, however, that it did lag very much behind. Where there is so wide a gap between supply and demand discontent is bound to arise. There was overwhelming evidence of a desire for these social facilities in the voluntary labour devoted to building temporary premises, and the existence of so many active clubs and societies.

Chapter XXIII

BRACKNELL

AMONG the ten sites for new towns suggested by Abercrombie in the Greater London Plan was White Waltham about three miles south-west of Maidenhead, on the main line railway from Paddington to Reading. Abercrombie suggested that 'it would form a good centre for decanted population from the overcrowded areas of West London, such as Acton and Southall.'

The Minister of Town and Country Planning decided that there should be a new town west of London for this dispersal, but a site was chosen about five miles south of White Waltham, at Bracknell on either side of the railway line from Waterloo to Reading. The reasons given in the explanatory memorandum on the draft designation order of 1948 for not adopting the site suggested by Abercrombie were that it 'consisted of high quality agricultural land, and partly because it would have interfered with the full use of the White Waltham airfield.'

In the draft designation order an area of 2,623 acres was proposed for a town with a maximum population of 25,000, but owing to objections at the public inquiry 763 acres of agricultural land were deducted, and it was therefore decided to build a town of the same population on the reduced area of 1,860 acres, which was designated on 17th June 1949. It was stated in the report of the development corporation for 1951 that the Minister could not be sure that he would not need to ask for some of the excluded land to be reinstated in the designated area. Uncertainty attended this for a few years. A more detailed examination of the site by the development corporation confirmed that more land would be required for the industrial areas, to the extent of 140 acres. This, however, was not agreed to by the Minister, though a draft designation order for an additional 59 acres of Farley Copse was made on 20th June 1952, and was the subject of a public inquiry in August and December of that year. The draft designation order for the addition was not confirmed, so the development corporation had the task of satisfying industrial requirements within the originally designated area.

In September 1961 it was decided to increase the maximum population of Bracknell from 25,000 to 54,000 and extend the area by some 1,230 acres on the western and southern sides. A larger addition of land had been hoped but some sacrifice, of about 150 acres, from the south-western salient was agreed after the inquiry, because of its value as agricultural land thus making the addition 1,080 acres. In October 1962 a further 346 acres was added to the area, bringing the total to

3,286 acres for a town of about 54,000 with allowance for natural growth to 60,000.

The site is about 30 miles west of London (Charing Cross) and 10 miles east of Reading. The small rural town of Bracknell, lying roughly in the centre of the designated area, had a population in 1949 of between five and six thousand. It is a very pleasant undulating wooded region between 200 and 300 feet above sea level, sloping gently from the south-east to the north-west. The east-west A 329 Wokingham road runs through its centre, and the railway from London, already mentioned, runs about half a mile to the south of the road.

THE OUTLINE PLAN

Preparation of the master plan was subjected to many delays, the principal of which was the procrastination in determining the size of the designated area, as already indicated. However, the plan was finally lodged with the Ministry in September 1954.

The town in this plan has four neighbourhoods: Priestwood in the north-west with a population of 9,020, Bullbrook in the north-east, population 8,310, both north of the railway, Easthampstead in the south-west, population 5,740, and Harmans Water with a population of 2,280, both south of the railway. A large part of Harmans Water is occupied by the Ramslade R.A.F. Staff College with extensive grounds. In addition there is a small district north of the centre called Wick Hill in which there are houses of a larger type between 1,200 and 1,400 sq. ft., and it is proposed in the plan to continue the development here on similar lines.

For the purposes of development each neighbourhood is divided into sections, thus Bullbrook and Easthampstead are each divided into four sections, and Priestwood and Harmans Water into three. Each of the neighbourhoods, has a shopping centre, and Priestwood and Easthampstead also have sub-centres. Each neighbourhood has a primary school; while there are two campus sites for secondary schools, one in the north and one in the south part of the town.

There are two industrial areas, the larger in the west between the railway to the south and Priestwood to the north, and the eastern area in the south-west part of Bullbrook. There is a generous provision of open space, for playing fields, and in the east in Bullbrook is Lily Hill a considerable area of parkland which is to become a public park. The town is surrounded by farms and undulating woodland country which makes the green belt particularly pleasant.

BUILDING THE TOWN

Very slow progress was made with building in the first few years, and up to the end of 1953, about $4\frac{1}{2}$ years after the new town was designated, only about 300 houses had been built. From 1954 progress was much more rapid, and a rate of over 500 houses a year was thereafter secured: a little over 500 in 1954 and 1955; about 650 in 1956 and 1957 a few

BRACKNELL

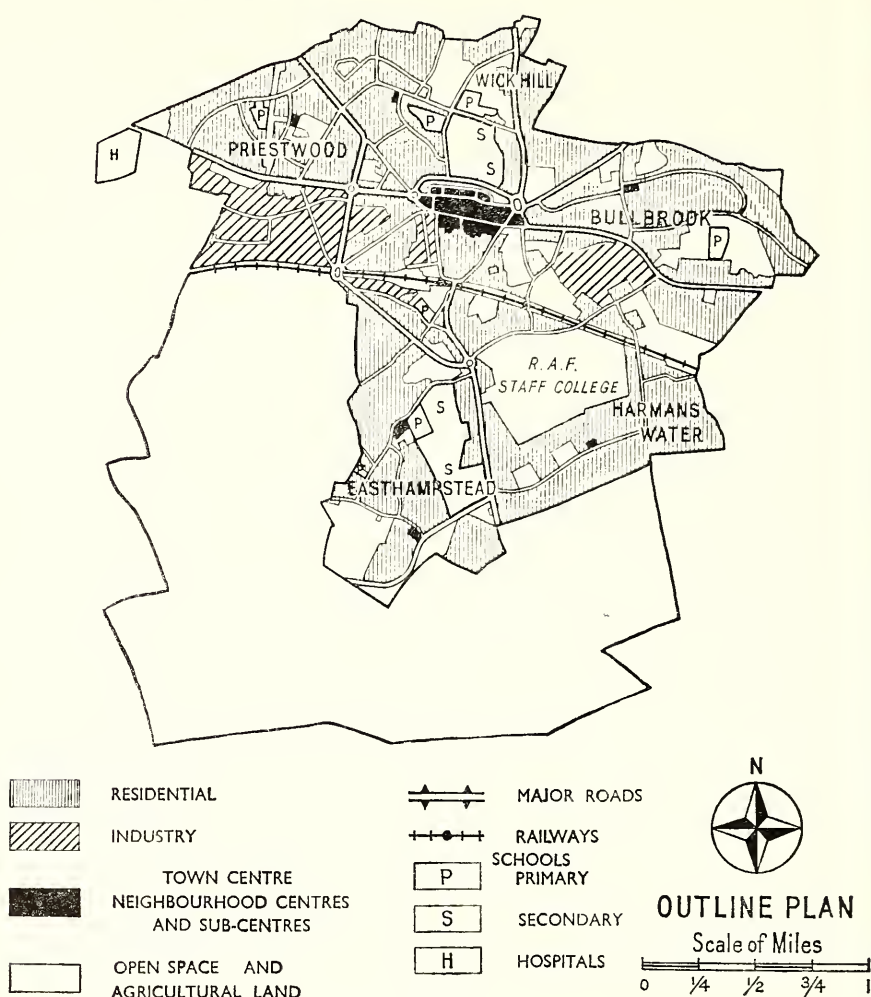


FIG. 54

over 800 in 1958, about 730 in 1959 which is exceedingly good progress. There was, however, a decline in output in 1960 to about 350, while that in 1961 was about 520, and about 227 in 1962. By the end of that year a total of 5,311 had been built, of which 4,920 were by the development corporation, 352 by the local authority and the few remaining by private builders.

The reasons for the early delays were the subject of comment by the development corporation in its annual report of 1953. After mentioning that in the absence of a master plan a three-year programme prepared by the officers was approved in November 1952, the report says that 'there were three limitations to the speed of development. Firstly, after the completion of the building in the Priestwood area, it would be

impossible, due to overloading, to connect any houses to the sewerage system until the new sewage treatment works were constructed' which would not be before November 1954; 'thus the planned rate of house-building had to be reduced.' The second reason was that the development of the industrial zone was dependent on the decision as to whether Farley Copse Farm should be included in the designated area, because if it were not, the zone would have to be replanned. A third reason was concerned with the town centre, and the decision as to whether the centre should be north or south of the High Street.

The first work in all the new towns is the site preparation, levelling, building of roads and trenching for services. In Bracknell work began in the Priestwood neighbourhood, and later, while the first houses were being built there, engineering works started in the other neighbourhoods of Easthampstead and Bullbrook. Priestwood was completed by the end of 1958, and by the end of 1959 considerable progress had been made with Easthampstead when it was more than three parts finished, while Bullbrook was a little over half built. A start was made in 1959 with Harmans Water, the last neighbourhood to be developed. The building of factories in the industrial area has kept a little in front of the housing, as it should be, while by the end of 1959 about half the shops section of the town centre, in accordance with the original plan, had been completed. Since then, however, because of the increased population and because of the changing conceptions of shopping areas the centre has been replanned. This has of course delayed progress.

HOUSING AND RESIDENTIAL AREAS

Housing in Bracknell is divided into four categories. The majority, called 'standard one' and representing about 75 per cent of the total, are houses of minimum standard with floor areas between about 750 and 1,050 sq. ft. built at a density of about 13 to the acre. They are let on weekly tenancies, and are built mostly in terraces with a few flats. 'Standard two' houses, representing about 12½ per cent, are slightly larger, between 1,070 and 1,170 sq. ft., are mainly semi-detached units, each with a garage, and built at about 7 to the acre. These are let on monthly tenancies. The third standard, representing about 10 per cent, are detached houses of 1,100 to 1,500 sq. ft. built at about 4 to the acre for the managerial classes. The houses of the fourth standard are larger houses for private ownership, and about 2½ per cent of the total is proposed each with about an acre of ground.

The houses built according to standards three and four are not mixed throughout the town with the smaller houses in the other two groups but are mainly segregated in various areas. The standard three types are concentrated in the Wick Hill area, to the east of Bullbrook and in Harmans Water.

All the earlier house building was of the first two standard types, and began in Priestwood. The first houses were a group of 72 with 19 garages designed by Louis de Soissons and Partners similar to those being built

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

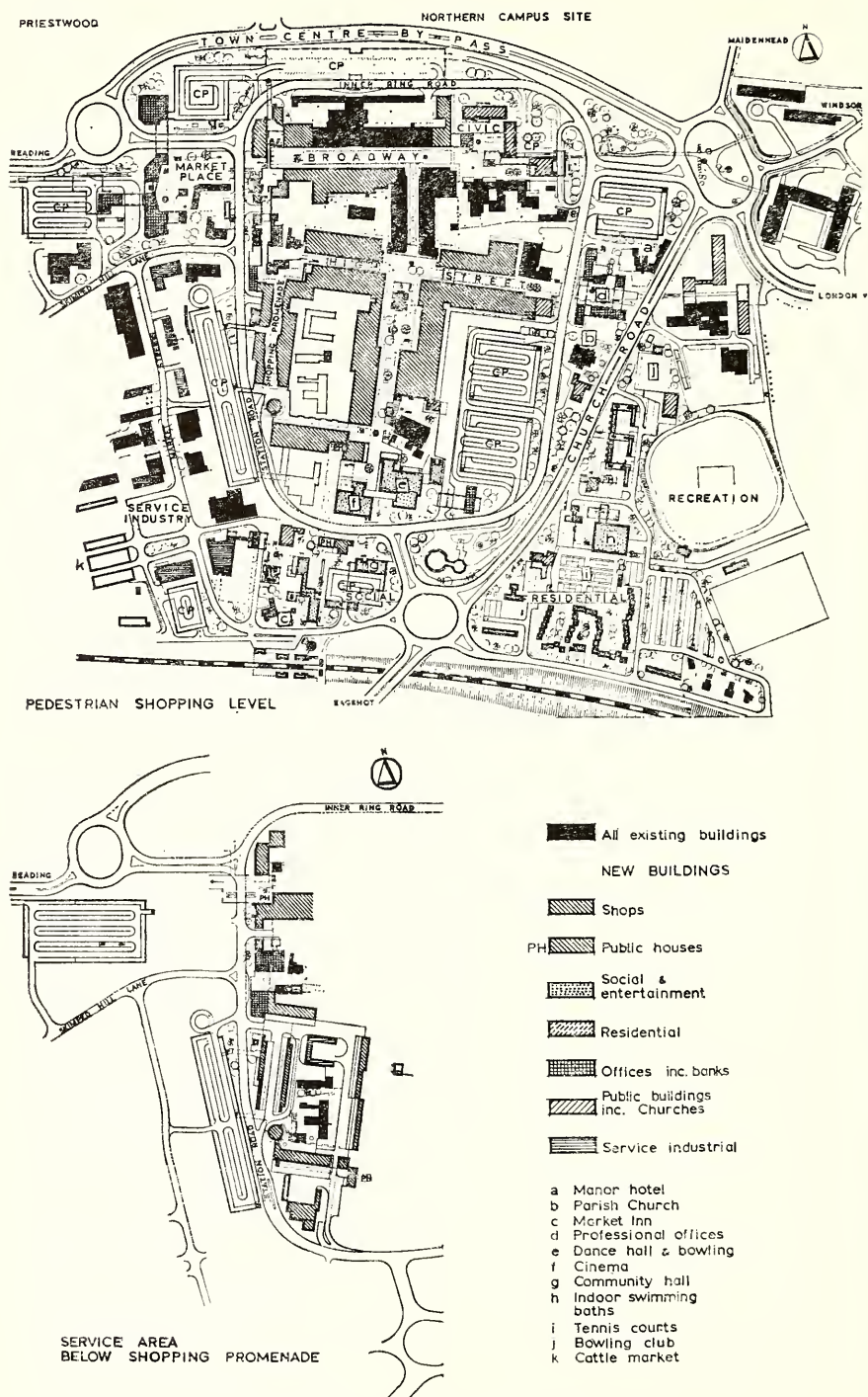


FIG. 55—Plan for Bracknell Town Centre 1963.

at Welwyn Garden City, and these were erected in the central part of the neighbourhood. The first house was occupied in August 1951. Priestwood was continued from this central area firstly to the west, then to the east to the designs of the corporation architects. For the most part the housing is simple and pleasing, predominantly of brick, and occasional monotony is relieved by colour washing. Occasionally there is a variation in the facing material, as in the long terrace block facing south on Priestwood Avenue where the upper storey for part of its length is faced with timber boarding. The slightly monotonous effect of some of the housing will probably be less apparent when the planted trees have grown sufficiently to introduce a further note of variety.

A greater degree of variety is found in the southern neighbourhood of Easthampstead, and here there are several groups of houses which are esthetically very pleasing. Among these are the semi-detached houses arranged on three sides of a square on the opposite side of the green in front of the neighbourhood shopping centre. This group won a Civic Trust award. A little north of the centre is a delightful and excellently proportioned curved terrace block of eleven three-story houses with curved bay windows on the first floor, somewhat reminiscent of Georgian terraces. The effect is enhanced by the generous lawn in front.

The layout of the residential areas is similar to that found in many of the other new towns. The roads are mostly curved and form islands, and the houses face outwards on to these roads. Culs-de-sac run into these islands in a variety of ways. Sometimes a road stops and is continued by a footpath which completes the island, two examples being Spencer Road and Fane's Close just north of the Wokingham Road in the Priestwood neighbourhood. Although the houses for the most part face outwards on to the roads they are not aligned in the conventional parallel fashion; instead there is a varying width of green between the houses and roads, while many of the shorter blocks are arranged in echelon fashion. There is also a very generous sprinkling of trees in Priestwood, and a plan of part of this neighbourhood was reproduced in the Ministry of Housing and Local Government's book on *Trees in Town and City* as an example of tree preservation and planting.

A good example of varied and effective cul-de-sac treatment is provided in the centre of Easthampstead neighbourhood. In one layout the terminations of two culs-de-sac—Clive Green and Herbert Close—are linked by pedestrian ways and a broad rectangular green, and in others the pedestrian ways link with the culs-de-sac to give access to other roads. The houses in this area are in varying lengths of terrace blocks mainly from 3 to 6 houses with a few semi-detached types. When the terrace blocks are larger than 6 houses the alignment is usually broken by a set back to avoid the monotony that otherwise might result. In part of the Bullbrook neighbourhood immediately west of Lily Hill a variation of the Radburn layout is adopted, and in a few island sites roads come into a small central area which is surrounded by garages, although

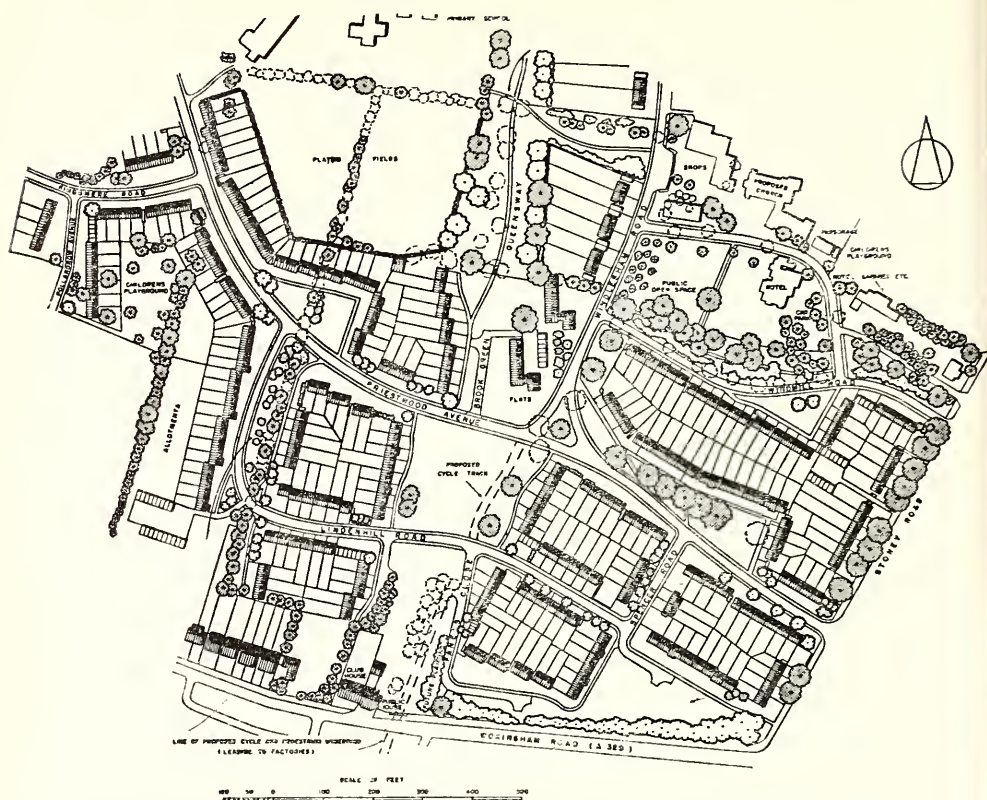


FIG. 56—Bracknell—Part of Priestwood neighbourhood which provides an interesting example of trees grouped in a residential area both by preservation and planting.

in most cases the houses face on to roads, and only in a few sections is the space between the houses a pedestrian way. It is a pity perhaps that this layout is not a more complete adoption of the Radburn principle, so that the greater seclusion of the pedestrian way and the more complete freedom from vehicular traffic, so pleasant in a residential area, could thereby have been secured.

NEIGHBOURHOOD CENTRES

Priestwood Square, the first neighbourhood centre to be completed, is an exceedingly pleasant shopping precinct. It lies to the east of Windleshams Road and consists of ten shops on three sides of a pedestrian area, partly open on the east side. The shops on the north and south sides are three-storey structures with flats over. Several trees that have been preserved greatly add to its attractiveness. A church forms part of the centre and nearby an existing large house has been converted into a hotel, 'The Admiral Cunningham.' The small sub-centre of Priestwood at the corner of Shepherds Lane and Horsneile Lane includes a Methodist Church and 'The Prince of Wales' public house.

The neighbourhood centre of Easthampstead similarly consists of ten

shops, but these are arranged in a row in three-storey buildings with flats. The centre is pleasantly situated and is set well back from the road.

THE TOWN CENTRE

The town centre of Bracknell was originally planned not only for a town of 25,000 population but as a centre and market for about another 15,000 living in the surrounding agricultural districts. It was partially an extension northwards of the shopping centre of old Bracknell with its 63 shops on either side of the High Street. The area was terminated east and west by roundabouts, while facing the northern boundary is a by-pass road. Provision was made for about double the number of shops that existed in the old town.

As the centre exists at the time of writing a spine road called Broadway runs through east-west parallel with the High Street and linking the two roundabouts. Shops with offices above face the central section of Broadway and a pedestrian way similarly faced with shops and offices links Broadway with the High Street. At the rear of the shops on the north side of Broadway is a service road. At the eastern end on the north side is a paved square surrounded by local and central government offices, and south of this is a police station, magistrates' court and central post office, while in the south-east is a college for further education which will probably incorporate the central library, and there is also a site for a community centre. To the west there is a square on the south side for an open market. To the south-west is an area for service industry, and here is a new cattle market which replaces the old one.

This plan could not be regarded as good and fortunately it has been entirely superseded by one published in 1963. In the first plan a new spine road is taken through the centre, and there is nothing to stop its being used as a through road. It means that there are three routes from London to Reading through the town, the High Street, Broadway and the by-pass. It may have been hoped that the through traffic would use the northern road, but there was no guarantee of this. In the plan of 1963, the whole central area is changed to a pedestrian precinct encircled by a ring road. The reasons for this change are that the town centre will have to serve a larger population because of its increased size, and because of the desirability, in accordance with contemporary planning trends, of segregating pedestrians and vehicular traffic in shopping areas if both are to exist happily together without getting in each other's way, with the great benefit of the increased security of the pedestrian.

The ring road is a one-way-three-lane-no-waiting road with four points of entry and with several underpasses to provide access for pedestrians and to the open market. There are seven multi-storey car parks and one surface park adjacent to the ring road, while two others will be near Victoria Hall and the railway station.

In making the whole area inside the ring road a pedestrian precinct, the High Street and Broadway, now busy streets, will, of course, be

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closed to traffic and become pedestrian ways. Running south from the High Street in the centre of the area is a spacious pedestrian shopping way. A good impression of this very interesting and notable plan can be obtained from the plan and models illustrated. If carried out as planned it promises to be one of the finest of town centres. Although it would involve the demolition of some of the older property most of the buildings of historical and aesthetic interest will be preserved.

INDUSTRIAL AREAS

As previously implied the establishment of industry in Bracknell has been a little in advance of housing and it may be said that the town seems to have proved attractive to industrialists. By 1962 twenty-seven firms were established, all but two being in the western industrial area. As an indication of the success of industry here twenty-five extensions to factories have been built since they opened. The majority of the firms are concerned with some form of engineering, including the manufacture of aircraft components and equipment, jigs and tools, and ball bearings, while other firms are concerned with building mastics, men's tailoring and furniture. In some cases the factories were built for the firms by the development corporation; in others the firms built their own premises. The result is certainly satisfactory, for this western industrial area must rank as one of the pleasantest in the country. Grouped mainly on either side of Western Road which is gently undulating, the factory buildings are set well back, which allows for stretches of lawn interspersed with flower beds, or edged with troughs of plants in front of the buildings, which show varied and generally pleasing industrial architecture. Its setting among wooded rural surroundings, still very much apparent to the west, greatly enhances its pleasantness.

SOCIAL ASPECT

The new town of Bracknell is being built round a small existing town, so the nucleus of many social activities was already there; but a question that inevitably arises in new town development is whether the existing population will mix with the newcomers, and whether the extension of social and community activities will be shared by the old and new population. As far as the development corporation has been able to observe there has been a satisfactory mixing, and the corporation was able to state in its report for 1954 that 'the "old inhabitants" are welcoming the newcomers and that up to date there has not been any move to form separate clubs for the incoming residents.'

As in the other new towns there are the usual societies and associations concerned with drama, art, music, horticulture, women's organisations and sport and youth clubs, many of which had existed in the old town, but which with the newcomers greatly expanded. In March 1953 the Bracknell Community Association was formed to which the

majority of the then forty existing associations of various kinds became affiliated.

Provision of adequate premises for the expanding activities of these associations has been gradually made. Three small halls already existed in Bracknell which served the needs of many associations. The premises of the Youth Centre in the High Street were, however, inadequate, and in 1955 new premises at Coopers Hill near the railway station were acquired. A little later, early in 1956, a new youth club was opened in Priestwood and this meets in the new Meadowvale School Buildings.

As the town grew so more associations catering for additional interests were formed and demands for suitable premises became more urgent. This was met to some extent by the acquisition by the development corporation of a large house which was let in June 1957 to the Community Association as a centre on a seven-year lease. It has proved to be a great success as one of the principal centres of social activities in Bracknell. During 1958 over 800 meetings of various kinds were held there, and by 1959 the centre was being used by about 2,000 persons a month. Another community centre, a converted rectory, was opened in Easthampstead during 1959. This had to be demolished in 1961, and a new hall was completed in 1962. In 1959 a small community hall was built and occupied in Bullbrook in the same year and this proved so popular that it was enlarged in 1961. In that year a Bracknell Civic Society was formed which we understand is the first of its kind in a new town.

The development corporation is very much alive to the growing needs of youth, as there will be a very high proportion of teenagers in a few years time, and thus the provision of youth centres is being given much consideration. The various churches are giving assistance and new centres are being formed in the neighbourhoods. Perhaps the most notable social circumstance in Bracknell is the later confirmation (1962) of the satisfactory mingling of the new population with the old. Socially the new town has been partially a growth from the old. It is to be hoped, however, that with all the enthusiasm for social and cultural activities noted in Bracknell some special multi-purpose buildings will be forthcoming, and that the site provided in the plan will not remain vacant for too long.

Chapter XXIV

CWMBRAN

IN the valley that stretches for about eight miles almost due north from Newport in Monmouthshire to Pontypool, a good deal of industry has grown up which includes iron and steel works, brickworks, and much that has spread from the Midlands, including the manufacture of nylon yarn, motor vehicle components, glass, dairy machines, valves, brake linings and biscuits. It is a region that has attracted industrialists, owing partly to the good road, sea and railway communications and to the availability of water, gas and electricity supplies, and of suitable sites. Up to about 1955 most of the workers in these industries lived in the surrounding towns and villages, often having to travel more than five miles to their place of work. The necessity of building housing estates for these workers had frequently been considered.

Approximately halfway between Newport and Pontypool lie the villages of Cwmbran and Pontnewydd which in 1947 together had a population of about 13,000. It was here that it was decided in 1949 to build a new town with a maximum population of 35,000 to provide housing accommodation for the workers in the industries in the valley, and the designation order was made on 4th November 1949. In the explanatory memorandum issued by the Ministry of Town and Country Planning, with the draft designation order, it was stated that 'it is expected that employment will eventually be found for about 7,500 persons in the valley in the immediate vicinity of Cwmbran. In addition there will be employment for about 4,500 at the recently erected nylon works at Mamhilad and in the Royal Ordnance Factory at Glascoed, both of which are within a reasonable distance of the proposed new town. At present a large percentage of the additional labour required for the factories has to be drawn from other districts, and over 2,250 workers are travelling into the area from distances of 5 miles or more. It is clear that if homes near their work are to be provided for those employed at the factories in the vicinity of Cwmbran, there must be a large expansion of population in the district'.

Although most of the local authorities in the region welcomed the establishment of a new town there were some criticisms of the exact site, and the principal alternative proposal was that it should be situated further to the north-east, which, although removing it a little from the main concentration of industry in the valley, would bring it nearer to the Nylon factory at Mamhilad and the Ordnance factory at Glascoed.

Mamhilad, it should be mentioned, lies $2\frac{1}{2}$ miles north-north-east of Pontypool and at least 6 miles north of Cwmbran, while Glascoed lies at least 5 miles north-north-east of Cwmbran. The reasons against this alternative given in the explanatory memorandum were that 'the Nylon works were deliberately established in open country for the benefit of the manufacturing processes, and there are obvious objections to the placing of any large scale development close to the R.O.F.' It was also pointed out that a situation to the north-east would involve encroaching on valuable agricultural land. It is difficult to feel convinced that these reasons are very strong ones.

In principle it cannot be said that the situation of Cwmbran for a new town is ideal. Four miles to the south is a town of 107,000 and four miles to the north is another of 44,000 and it is putting a handicap on the provision of shopping, social and recreational facilities in a new town to place it in such close proximity to established competition. Still, the industries are, for the most part, there, the workers should have houses within convenient distance of their work, and it is difficult to think of a better alternative in the region. The clear demarkation of Cwmbran by means of a green belt should be regarded as imperative, and a continuous urban sprawl between Newport and Pontypool should be avoided at all costs. The problem as seen by the planning consultants was 'to provide more houses near the work rather than to provide more jobs'. Reference is also made to the view of the Board of Trade that no additional large-scale employment is needed at Cwmbran.

The designated area consists of 3,160 acres in the Afon Lwyd valley of which 2,550 acres are in the Urban District of Cwmbran—the valley of the Crow—and 610 acres in the rural district of Pontypool. The site is an attractive one with contours varying from 125 feet at the southern extremity of the valley, rising to about 220 feet at the northern end near Pontnewydd, with hills to the east and west, rising to 400 feet on the hill of St. Dials near the west-centre of the site, and to nearly 600 feet to the north-west and 300 feet to the east. Two railways run south-north through the site, the Monmouthshire Eastern Valley Line and the Hereford-Newport main line with three stations in the area, Llantarnam Junction, Cwmbran and Upper Pontnewydd. The Newport-Abergavenny Trunk Road, the A 4042, runs on the eastern boundary of the area, while the Llantarnam Road, the B 4244, runs through its centre. The river Afon Lwyd courses through the middle of the valley, and being fast-flowing causes periodic flooding, while the disused Monmouthshire Canal follows a roughly similar but straight course.

OUTLINE PLAN

In February 1950 Anthony Minoprio, Hugh G. C. Spencely and Peter W. Macfarlane were appointed to make a survey of the area and to prepare an outline plan. This was submitted to the Minister of Town and Country Planning in the following November. It was the subject of a public inquiry in July of the following summer when only three

CWMBRAN

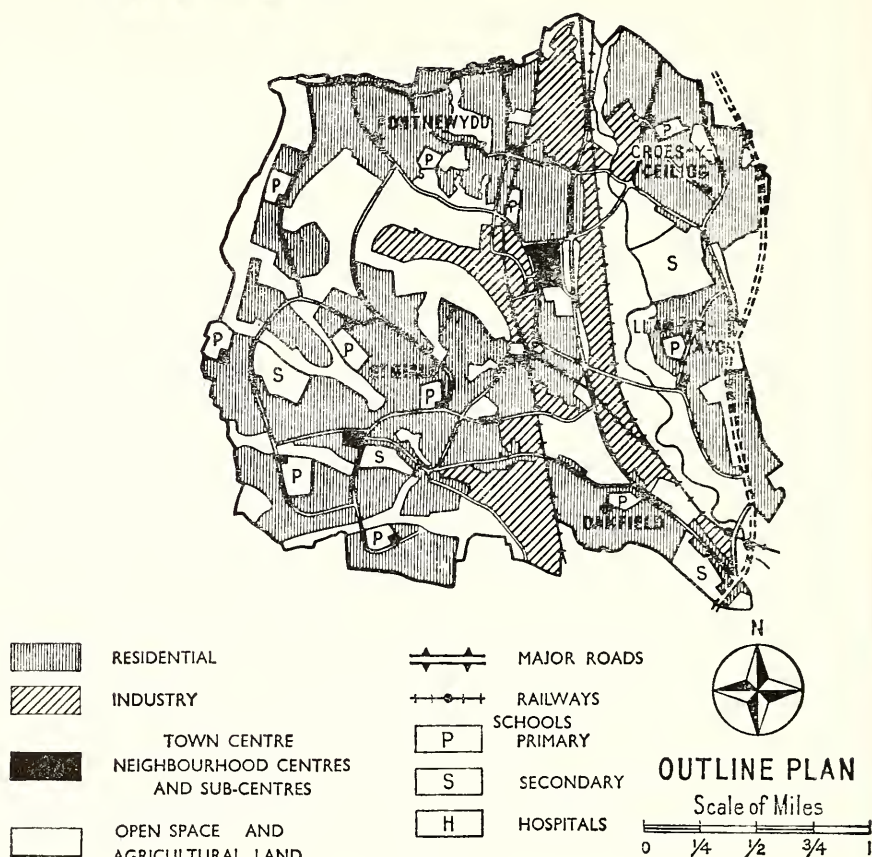


FIG. 57

persons submitted objections, and it was approved by the Minister in December 1951.

The existing industries are situated mainly between the two railway lines in the valley along the north-south length of the site, while a tongue of the industrial region projects westwards. The industrial area thus occupies the centre of the town, and the town centre is planned in the middle of it, with an area for service industry nearby. Seven residential neighbourhoods are provided which are grouped round the town centre and industries. To the north is Pontnewydd, planned for a population of 6,680, to the east Croes-y-Ceiliog (5,035) and Llan-yr-avon (originally Croes-y-Ceiliog South) (5,000); to the south are Oakfield (4,175) and Coedeva (5,454) with St. Dials (4,312) nearer the centre; while to the west is Greenmeadow (3,644). Each neighbourhood has a small shopping centre and primary school nearby while in addition Pontnewydd has its old shopping centre and St. Dials has the shopping centre of Old Cwmbran. Three secondary modern schools have been provided in the north-west, south-west and south-east, and a fourth in

the east near the centre forms part of a campus with a grammar school and technical school. Strips of open space are generously provided in the town. One wide strip is between Llan-yr-avon and the industrial area and the railway, and there is an extensive stretch of open space to the west of the town within the designated area.

It will be seen that the neighbourhoods average about 5,000 population, and are thus approximately similar in size and conception to the neighbourhoods of Crawley, with one primary school and shopping centre in each. They make a logical plan, and being grouped on all sides of the town centre all residential districts are within $1\frac{1}{2}$ miles of it. Among the reasons given by the consultants for planning neighbourhoods of this size was that experience has shown that such a population 'can maintain a local shopping centre of twenty shops, with a bank and post office, a junior and infant school, and certain community buildings such as a hall, a clinic, and branch library'. As in all properly planned residential neighbourhoods main roads do not go through but between them.

One particularly important part of a plan of a new town situated only at short distances from existing towns to the north and south is that it should be surrounded by a clearly defined green belt of adequate width. With Cwmbran a green belt has been allocated over which the development corporation shares planning control with the Monmouthshire County Council. This is about one mile in width to the east and west, but on the north and south where it is most needed it is unfortunately in parts narrower than a mile. The north suburbs of Newport press closely on the green belt, while in the north building is continuous south of Pontypool to within one-third of a mile of the boundary of the new town. This all too narrow green belt should be regarded as sacred.

It is not intended, at least in the early life of the town, to build more large factories in the industrial areas, but only buildings for service industry near the town centre.

BUILDING THE TOWN

The building of Cwmbran began in 1952 after the worst of the economic difficulties of the post-war period, which often put a brake on building, had been overcome; while there was little opposition to delay the start. Thus by the end of 1954, about three years after the outline plan received official approval, over a thousand houses had been built, and for each of the following years between 500 and 700 houses were completed. By the end of 1962 about 6,750 houses had been provided in the new town of which nearly 4,728 had been built by the development corporation, and the estimated population had reached about thirty-two thousand, thus well on the way to completion of the originally intended size of 35,000. At that time four of the seven neighbourhoods were completed:—Pontnewydd, Croes-y-Ceiliog, Oakfield and Llan-yr-avon, and the other neighbourhoods were in process of building. Progress has been made with the town centre, and it is not un-

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reasonable to expect the town to be practically completed to its first planned size by the end of 1965, that is about thirteen years after its commencement. The originally planned population of 35,000 has, however, since been increased to 55,000.

HOUSING AND RESIDENTIAL AREAS

In the consultants' report the view is expressed 'that a high proportion of flats is unlikely to be popular' and it was suggested 'that not more than 10 per cent of the population should be housed in flats in the first neighbourhoods built' and 'that terrace housing following the contours will prove to be the most useful for development on the steep slopes'. This advice seems to have been followed in the types and layout of houses, and probably not more than 10 per cent of flats have been built. In Croes-y-ceiliog and Llan-yr-avon which lie on the hills to the east of the valley, terrace blocks of varied houses generally follow the contours, although occasionally, as the full utilisation of the site requires, a road with a row of houses cuts across the contour on a fairly steep hill. The layout for the most part is one of curved roads with squares or triangular formations set back from the roads, and the terrace housing which prevails is sometimes arranged in echelon fashion. The houses vary considerably; sometimes there is a series with gable ends facing the road, sometimes the series is bound together by long horizontal lines. The roof pitches are generally low, not more than 25 degrees, while a variety of facing materials is used for the houses—brick, roughcast, timber boarding, stone and tiles—often two or three being used in conjunction.

In some houses the plain wall forming the entrance porch is in rough stone and in some it is in tiles of green Westmoreland slate, both of which give a very pleasing effect. Much care has been exercised in the planting of trees to give a promise of verdancy to the neighbourhoods, and such varieties are found as plane, silver birch, mountain ash, wild cherry, hawthorn, ailanthus, maple, copper beech, whitebeam, crab apple, scots pine and silver-leaved box elder. The few flats that are built are usually placed nearer the neighbourhood or town centres, and these are introduced, it would appear, partly with a view to architectural effect. For example in the 1957 report it is stated that architectural interest will be added to the main unit centre of Croes-y-ceiliog by the completion of some three-storey and four-storey blocks of flats which are being built immediately adjacent to the shops.

THE NEIGHBOURHOOD CENTRES

At the time of the designation three groups of shops existed in the area, one at Pontnewydd, one in St. Dials, both near railway stations, and one at Oakfield. In conformity with the outline plan a new shopping centre has been built at Oakfield, two at Croes-y-Ceiliog, one in the centre and a small group in the south, one at West Pontnewydd, while others were in progress during 1959. The six shops built at Oak-



(a) Sub-unit centre at Croes-y-ceiliog with four shops, gardens and a view of distant hills.



(b) The neighbourhood centre of Oakfield with shops arranged in echelon fashion, with lawns and trees in front.

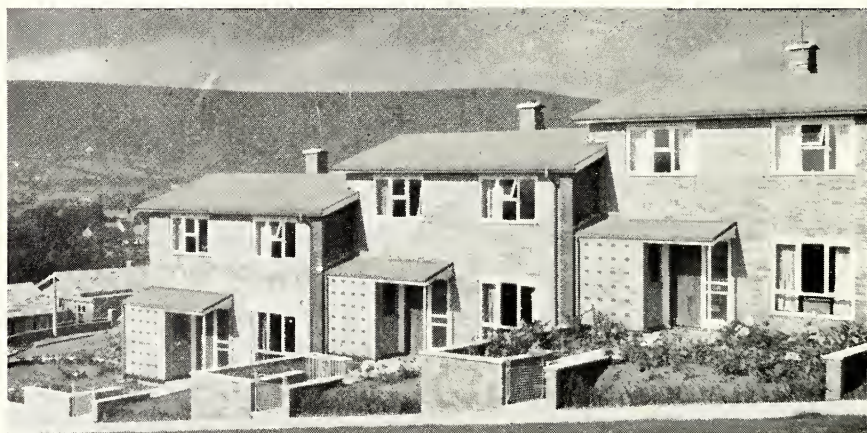
Plate 55.
Cwmbran.

(c) View of part of Croes-y-ceilog neighbourhood from across the valley of the Afon Llwyd.





(a) Row of closely built detached houses on one of the many hills in Cwmbran.



(b) Terrace houses on a hill. The serried set backs of the frontages accords with the step-up from roof to roof.

Plate 56.
Cwmbran.

(c) Cherry Tree Close. Croes-y-ceiliog neighbourhood.
A compact group of traditional housing. Architect:
J. C. P. West.



field make a pleasing group. They are single-storey; five are arranged in echelon fashion, with the sixth continuing at the side of the fifth to form a corner; paved arcading with a canopy effect shelters the shoppers in bad weather, and before the shops are lawns with trees, under which seats are arranged. There is a sense of peace and pleasing seclusion in this group which is altogether delightful. A very pleasant public house has been built nearby. The provision of canopies and segregation of pedestrians from vehicular traffic is a feature of all the shopping centres.

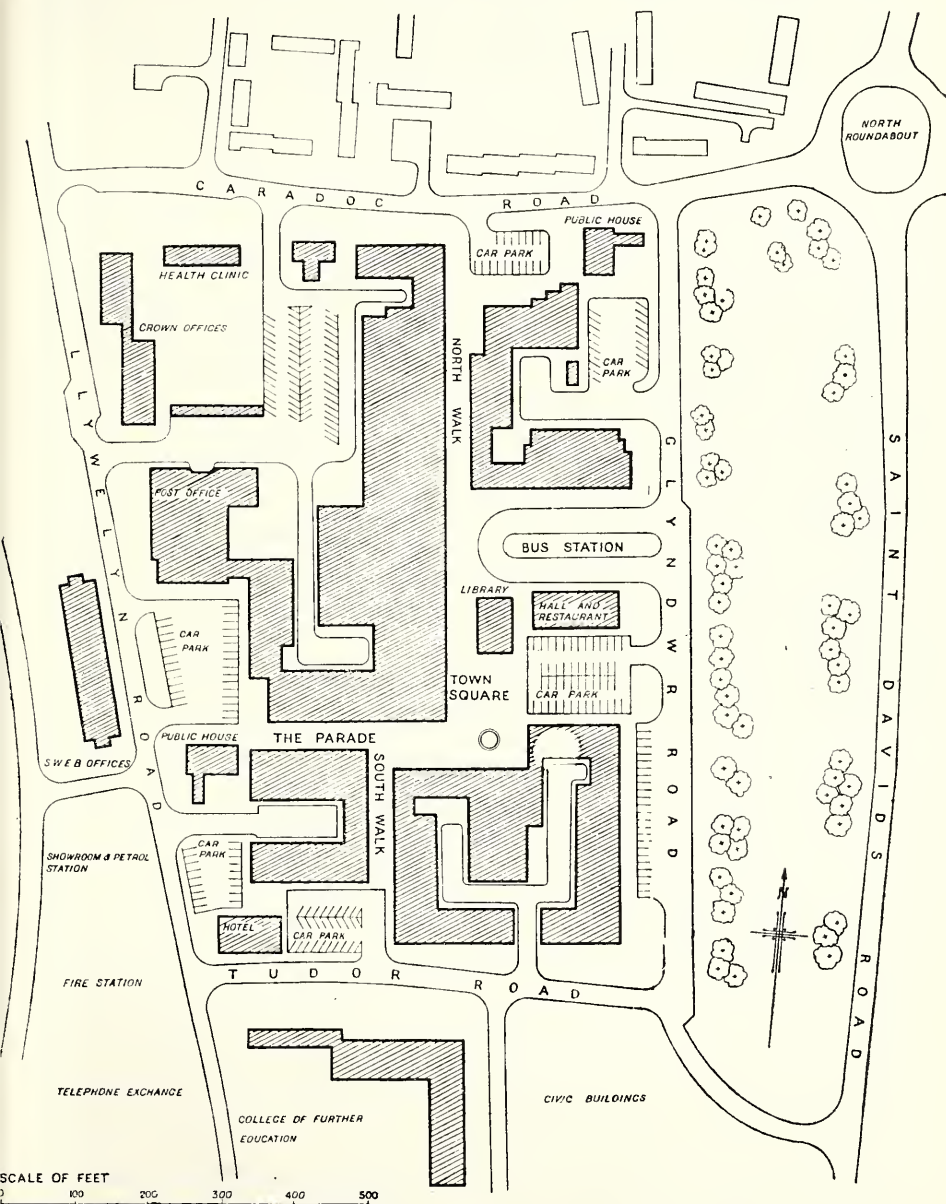


FIG. 58—Cwmbran Town Centre.

At West Pontnewydd the shopping centre consists of a row of eight one-storey shops on the side of an incline so that a raised terrace, approached by steps, runs along the front of the shops. Near this centre are some three-storey and four-storey blocks of flats, while a public house with bowling alley was completed in 1960. A tenants community hall is also being built here.

The main shopping centre at Croes-y-Ceiliog consists of a row of six shops, and a public house, and the sub-unit centre has a row of four shops very attractively situated with an extensive paved area in front with strips of garden on either side of the footway adjoining, which connects with a group of old people's dwellings arranged on three sides of a square. A memorial hall is being provided near this sub-centre.

THE TOWN CENTRE

The consultants made a suggestion in their outline plan for the layout of the town centre, but that which is being built is an improvement in one very important feature. The former showed a road running through the centre from north to south, but the plan adopted shows roads converging to the centre, but none through, and instead there are pedestrian walks between the shops called North Walk, South Walk and The Parade. To the east adjoining Glyndwr Road are three road inlets, one forming Gwent Square, one a bus station and the other a service way and car park. Similar inlets are on the other three sides, and car parks are arranged on the periphery of the centre, which in addition to rows of shops and offices includes a post office on the west side at General Rees Square¹, a cinema in the south-east corner, a hotel in the south-west corner, a public house on the east side and one in the north-east corner. The main excellence of the plan is in the provision of pedestrian ways for shoppers.

INDUSTRIAL AREAS

As we have said, one of the main purposes of the new town of Cwmbran is to provide homes near the work of those employed in the existing basic industries of the region; which are almost adequate for a population of 35,000, except for service industries situated to the west of the town centre; thus any additional industry can in the early stages be only very limited and should be such as to give added diversification. In the early years application was made by Quality Cleaners Ltd. for a site for a factory of 20,000 sq. ft. floor space but apparently to the regret of the development corporation the Board of Trade would not issue an industrial development certificate because, 'having regard to the extent of existing industrial development in the area, there shall be no direction of new major industry to the area for the present'.² However a large new bakery for the Monmouthshire Co-operative

¹Named after the General Manager of the development corporation, Major-General T. W. Rees, C.B., C.I.E., D.S.O., M.C., who died in October, 1959.

²See Second Annual Report of the Cwmbran Development Corporation 1952.

Bakeries Ltd. was built in 1956, and the Cambrian United Dairies Ltd. completed their milk distribution centre a little earlier; but these are rather service industries. Several of the older factories have made considerable extensions to their premises, among them British Nylon Spinners Ltd., Girling Ltd., Guest Keen & Nettlefolds and Alfa Laval Ltd.

The development corporation has felt the need for more diversification of industry so as to avoid unemployment, which would, of course, mean more factories and would involve some modification of the directive of the Board of Trade. In its 1957 report the corporation stated that 'the time is approaching when active steps to encourage the establishment of some new lighter industries might be desirable to increase diversity and to balance changing conditions as automation and increased mechanisation continue to develop.' Two years later in 1959 the corporation referred to 'some contraction in industry . . . which has resulted in some short-time working, a reduction of overtime work in some industries and in particular the shortage of employment for school leavers', and the corporation refers again to the desirability of introducing new and diversified industries for the area and speaks of consultations, in association with the Cwmbran Urban District Council, with interested parties and organisations. It seems that if fairly stable employment is to be secured in the town other industries very different from those existing will have to be introduced. The danger here is that in times of prosperity and all-round full employment there will inevitably be some call for further increasing the maximum population of the town.

SOCIAL ASPECT

Social life in a new town might be grouped under the five headings of the more intimate relations of families and friends, the social life of clubs and societies that bring together people of kindred interests, cultural and other classes and similar forms of adult education, the social life attached to churches of various denominations, and the more public social life of inns, hotels, cafés, cinemas, the streets and parks.

Those responsible for building a new town cannot provide this social life; that must spring from the people themselves; but they can provide the setting and premises whereby this social life can flourish. In providing good houses they meet the requirements of the first category. For the other categories the Cwmbran development corporation has been very much alive to the need of premises for various activities. As in most of the new towns there is a large number of societies and clubs for various pursuits, and it is not perhaps surprising in a town so largely Welsh in character that musical societies are conspicuous, there being two operatic societies.

In providing premises for the various social activities the development corporation has enjoyed the co-operation of the Monmouthshire County Council. In building schools in Cwmbran the council has in

some instances attached community facilities somewhat on the lines of the Cambridgeshire village college principle. This was done firstly at the West Pontnewydd Primary School and then on a bigger scale as a wing of the Coedera Secondary Modern School at Croes-y-Ceiliog. In addition, in response to representations made by the tenants' associations that small meeting halls should be provided to serve needs that cannot be met by the adult wings of schools, a start has been made with a small meeting place at West Pontnewydd. The functions and classes held at the two community colleges have proved very popular and have made a notable contribution to the social life of the town. Several churches were in course of building at the end of 1961 and these will make their contribution to social life.

The more public social activities will depend a good deal on the completion of the town centre, including public houses, cafés and a cinema in course of erection, but progress in the general provision of buildings for social and recreational purposes has been rather slow. Houses should have first priority, of course, but there should not be too great a lag in providing those social, cultural and recreational facilities which add so much to the interest and pleasantness of life; otherwise some discontent is inevitable. If there has been a lag at Cwmbran, what has been done seems to be in the right direction.



(a) Corporation Street, the main thoroughfare of the town centre.



(b) View of town centre from one of the tall buildings in Corporation Street.

Plate 57.
Corby.

(c) Farmstead estate, Birling Place, looking north-east. The houses are the three-bedroom type with combined living and dining room.





(a) Becks Green estate, Fairlight Court looking west.



(b) Corby Grammar School, with playing field. Architect: A. N. Harris (Northampton County Council).

Plate 58.
Corby.

(c) Farmstead estate, Burgess Court, looking north. As in 57(c) this is an example of houses grouped round greens and footpaths.



Chapter XXV

CORBY

IN the northern part of Northamptonshire ironstone has been quarried for centuries, and the resources of the mineral in the area are still considerable, indeed the largest in the country. Until 1934, however, extensions of the workings were slow. The village of Corby, the centre of the Northamptonshire ironfields, had a population in the middle of the nineteenth century of about 850 and by 1934 it had risen to only 1,500; but in that year Stewarts and Lloyds, Ltd. came to the area to extract ironstone on a big scale by the most modern methods, and to build steelworks for the production of steel strips and tubes.

The old village of Corby is about 8 miles north of Kettering on the east side of the main railway line from London to Nottingham. The steelworks of Stewarts and Lloyds Ltd. were built a little north and north-east of Corby village. It was necessary to provide houses for over 4,000 workers to operate the steelworks, most of whom came from Scotland, and as assistance was not forthcoming from local housing authorities, Stewarts and Lloyds Ltd. embarked on the task itself. In five years (1934-39) the company built 2,150 houses on 280 acres to the west of the railway in the districts of Pen Green and Steedfall, and also provided premises and grounds for a large social and sports club. Until 1939 the area came under the Kettering Rural District Council, but in 1939 the Corby Urban District Council was established. After the war that authority took over the task of providing houses for the workers at Stewarts and Lloyds Ltd., and it built them on an estate in Willowbrook at the southern part of Steedfall forming a half-circle to the west of the earlier housing estate, thus providing a further 1,500 houses by 1950. The population at that date had risen to about 17,000. The number of workers in Stewarts and Lloyds Ltd. was then in the region of 6,000, while proposed expansion would provide employment for an additional 4,000. A proportion of the workers, probably about 1,000, travelled from surrounding villages and towns, principally from Kettering. It was unsatisfactory that they should have to make these long journeys to work, especially as the steelworks operate on a continuous shift process; thus it was necessary to build a considerable number of additional houses at Corby if people were to live in the vicinity of their place of employment. It was decided in 1949 that the best way of doing this, so as to provide also the educational, recreational and shopping facilities to ensure a satisfactory home environment, was to build a new town under the New Towns Act with a total population of 40,000. A draft

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designation order was issued for an area of 3,550 acres, including Corby village and the existing housing estates west, south-west, south and north of these. Subsequently it was decided to exclude from the new town an area of 420 acres to the south-west which was regarded by the Ministry of Supply as essential for ironstone working, and another area of 630 acres to the west which was regarded by the Ministry of Agriculture as essential for food production. This meant a total reduction in the area by 1,050 acres, and the Corby New Town was designated on 1st April 1950 with an area of about 2,500 acres to accommodate a population of 40,000. This was increased early in 1963 by 1,600 acres to a total of 4,100 acres for a population of 55,000 with room for a natural growth to 75,000.

In August 1951 Professors William Holford and H. Myles Wright were appointed as planning consultants to prepare a report and an outline plan. In reducing the designated area while retaining the proposed maximum population it appears to have been understood that the area could be mainly housing and that this could be at a fairly high density, while land from which ironstone had been extracted could be made available later for other needs. But the consultants took the view that Corby needed a town centre and other amenities that require land at once, if it was to be a town in the full sense, while, on the matter of housing densities, the consultants pointed out 'that there was evidence that most of the people who would live in the new neighbourhoods were likely to prefer a house to a flat or maisonette', while flats cost more than 2-storey houses to build. The consultants, therefore, proposed an extension of the designated area southwards in the region of the 420 acres which had been taken from the original area for ironstone working, and the development corporation accordingly requested an addition to the designated area. This was finally agreed to and a designation variation order was made on 12th September 1952, for an area of 2,677 acres.

The site of the designated area is gently undulating and consists of four shallow valleys draining eastwards. The general slope is from the north-west where the ground is about 440 feet above sea level to the south-east where it falls to 300 feet. In the centre of the area are Thoroughsale and Hazel Woods, attractive open spaces comprising some 220 acres.

OUTLINE PLAN

In the plan prepared by the consultants the town is divided into seven neighbourhoods with considerably varying populations. Three of these existed when the plan was made in 1952, namely Corby village which, in the plan, was to have some reduction of population from 1,800 to 1,500, Pen Green and Steedfall which had been built mainly by Stewarts and Lloyds Ltd., and which were to have slight reductions, from 3,300 to 3,000 and from 7,600 to 7,300 respectively; while Willowbrook which had been half built by the Urban District Council was to have a popula-

CORBY

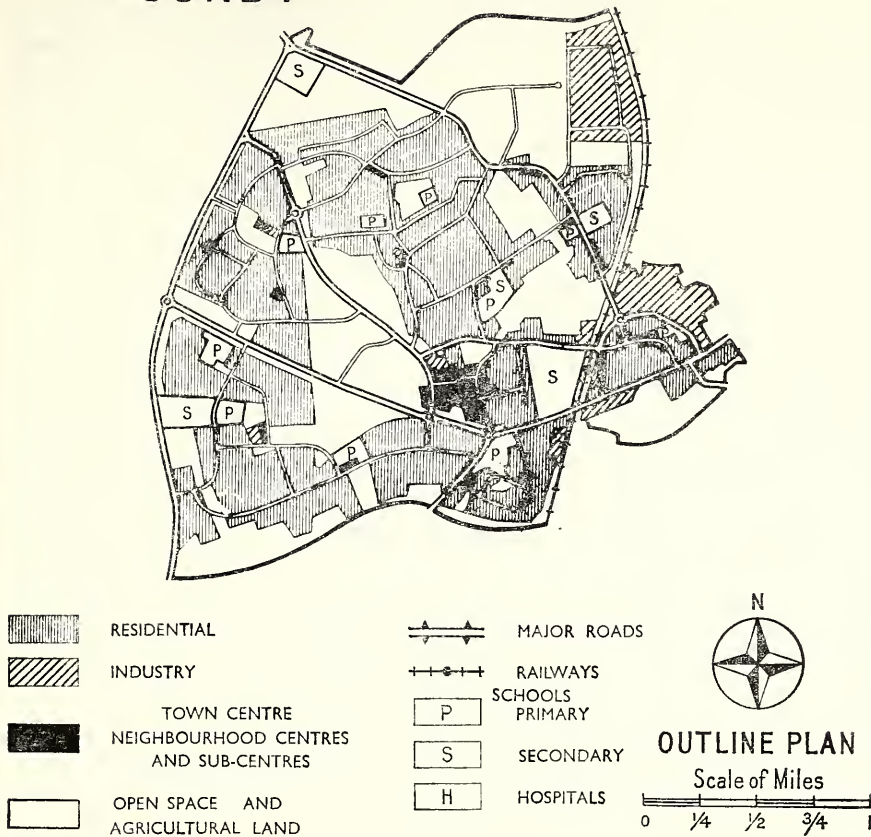


FIG. 59

tion of 6,300. Two completely new neighbourhoods were proposed, Lodge Park to the north-west with a population of 5,750, and Beanfield to the south-west with 9,000, while the south-eastern neighbourhood, comprising Wheatley, Gainsborough and Exeter, would be almost completely new with a population of 6,500 (existing 500). Each of the smaller neighbourhoods is planned to have one primary school, while the three larger neighbourhoods, Beanfield, Willowbrook and the South-East, each have two. Of the secondary schools proposed, two are in the south-west and one in the north-east, while a grammar school and technical college are proposed near the centre. There were five existing shopping centres, and a few more were added in the new neighbourhoods of Lodge Park and Beanfield. It is proposed that Thoroughsale and Hazel Woods should be preserved as a large open space, opened up by paths and roads to provide walks, while a part could be devoted to playing fields and a part for a commercial timber plantation.

The town centre is on high ground, not quite geographically central, but towards the south-east. The result is that it is between $\frac{1}{2}$ and $\frac{3}{4}$ of a mile from the most remote residential area in the south-east, but nearly two miles from the more remote residential areas of Lodge Park in the

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north west. It would, however, have been rather difficult to place the town centre more in the geographical centre as that position immediately to the north was occupied by the Urban District Council housing. To avoid the disadvantages of an entirely one-industry town, two additional areas are planned for light and service industries, one fairly large in the north-east and one immediately south of old Corby Village.

In the immediate future Corby will be surrounded by open-cast iron-stone workings, but it is hoped that these will ultimately become green belt land. The master plan was approved by the Minister in November 1953.

BUILDING THE TOWN

The corporation decided that together with the urgently needed houses the town centre should be provided quickly, as there was already a population of 17,000 in need of such a centre and in a few years this would be much increased.

At the time of designation in April 1950, the Corby Urban District Council was building houses at the rate of between three and four hundred a year. Housing by the development corporation began in 1952 in the south-east neighbourhood near the town centre and by the end of that year eighty were completed. Both the Urban District Council and the corporation continued to build several hundred houses a year, the latter at an increasing rate and the former at a diminishing rate, so that the totals for the corporation for the successive years 1953 to 1962 were about 384, 396, 405, 450, 580, 513, 399, 457, 355 and 769; while those for the Urban District Council were 402, 281, 185, 75, none, 45, 2, none, none and 19. It will be seen, therefore, that the corporation gradually took over the task. Since October 1952, when it completed its first house up to the end of 1962 it had provided 4,770 houses, while the Urban District Council had built 1,927 since the war. The population of Corby was thus nearly 40,000, more than three-quarters of its maximum size.

The building of the town centre had kept pace with housing, and at the end of 1958 the major portion of it had been built including the shops on either side of Corporation Street—the main thoroughfare—the market square with the shops surrounding it and the bus station. In this progress, education and amenities were not forgotten; ten new schools had been provided, including the grammar school near the centre and the first stage of the technical college, as well as six public houses and three churches. Fourteen new factories on the two industrial estates had been built and two further factories were completed early in 1959.

HOUSING AND RESIDENTIAL AREAS

The policy in providing dwellings has been, in the first place, to redress the lack of balance in the housing by Stewarts and Lloyds Ltd. and the Urban District Council. In a survey it was found that a very large proportion of the dwellings had 4 and 5 rooms, while there was a

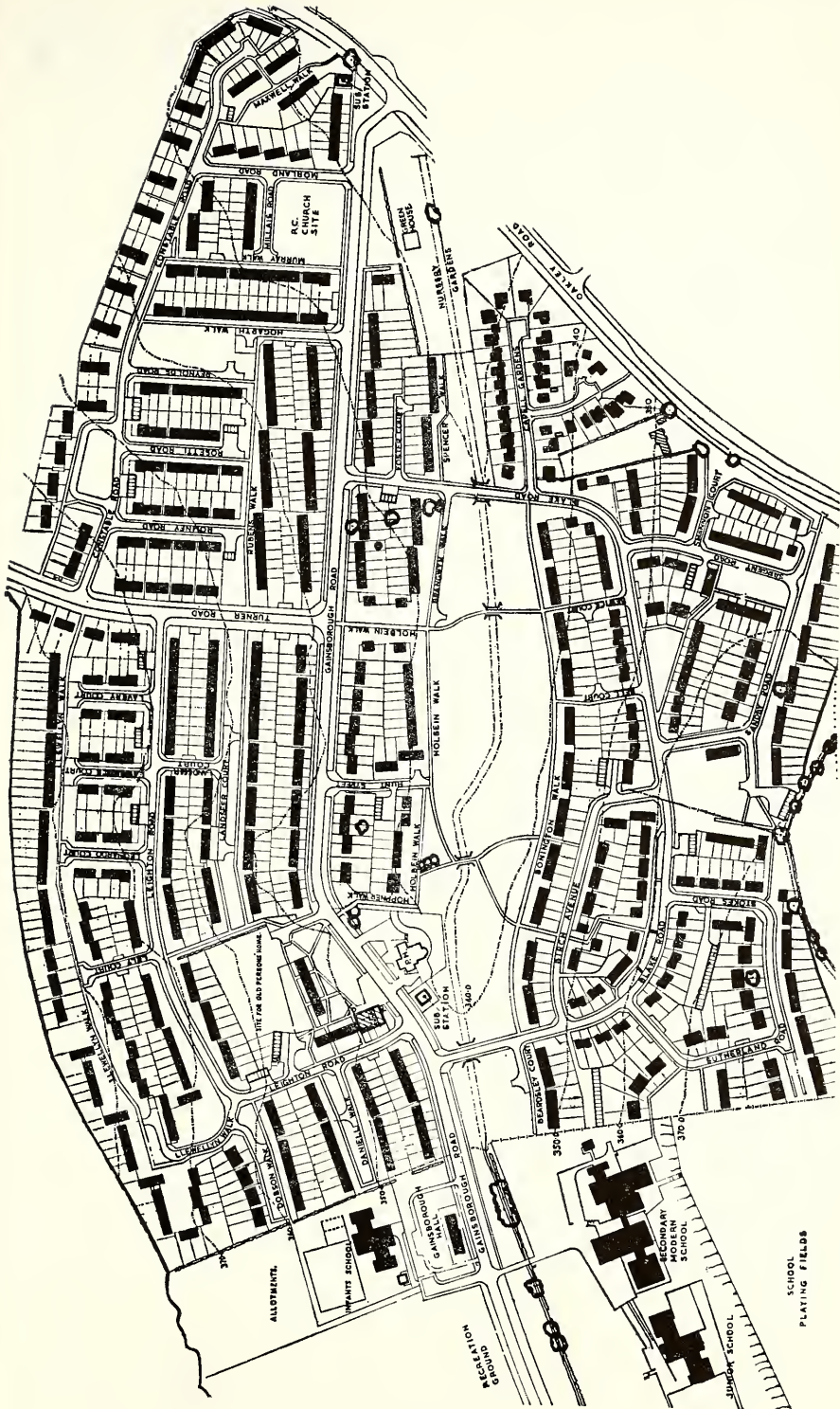


FIG. 60—Corby—A part of the south east neighbourhood. Most of the roads and pedestrian ways are named after famous British artists.

deficiency of both small dwellings of 1, 2 and 3 rooms and of large family dwellings of 6 rooms or more. The corporation thus planned to build mainly the smaller and larger types in the first few years. Some of the former have been flats near the town and neighbourhood centres.

The principal residential areas completed by the development corporation at the end of 1962 were the south-east neighbourhood and most of Beanfield. The layout of these areas is generally attractive and compares favourably with that of the other new towns. In its variety it offers a contrast to the residential areas of the Urban District Council and of Stewarts and Lloyds Ltd., which are a little monotonous with their straight roads and straight rows of houses of similar design.

The Exeter estate of the south-east neighbourhood, a pleasant example of housing layout, consists of a main estate road, looped south from Oakley Road, one of the main town roads. Off this loop are several smaller irregular loops on either side and around these the houses are grouped. There is a 'village green' near the centre of the area, and a little to the east of this is an attractive group of five shops forming a concave front on a corner, adjoining another row of shops with flats over. Opposite is the 'Lantern' public house, and a degree of height in this grouping is obtained by hilly ground at the front and a few blocks of flats in the vicinity. If one criticism can be made of this generally pleasant residential district, it is that there are too many through roads, too many traffic loops; it would have been better if many of these had stopped short of the complete loop, and have become pedestrian ways for a part of it.

A little to the west in the triangle formed by the new Exeter Way and Oakley road, these defects are overcome, and the layout consists of a series of culs-de-sac running off the principal roads with pedestrian ways connecting them. It is an excellent layout, worthy of study by planners.

Gainsborough road is the principal road of the district running east-west. For a little way Constable road runs roughly parallel to it on the north side. A series of culs-de-sac off Constable road link with a footpath called Rubens Walk. A little further west a similar series of culs-de-sac off Leighton road are connected at their terminations by a footpath called Llewellyn Walk. These examples are typical of the area. The housing is of a fair variety of terrace blocks, mostly of four and six houses with some of eight, and semi-detached and detached houses. The shopping centre is again a group of shops on a corner with a public house opposite. Incidentally all the roads in this part of the south-eastern neighbourhood are named after artists, nearly all British artists. Indeed the only two foreign artists honoured are Rubens and Holbein, who both spent some time painting in England.

TOWN CENTRE

The town centre follows in principle the plan suggested by the consultants in their report and master plan. It consists of a main street—

Corporation street—running east-west and linking two of the main town roads—George street and Elizabeth street—running north-south. At the eastern part of Corporation street on the north side is a market square with shops continuing on its west and south sides while on its east side next to Elizabeth street is the bus station. On the further side of Elizabeth street is the police station which serves as an eastern terminal building to Corporation street, while at the western end a civic centre is planned which was the subject of a competition in 1959. The winning design by Enrico de Pierro, Nigel Farrington and John Dennys consists of a civic square intended as a pedestrian precinct round which are grouped the assembly halls on the north side, municipal offices on the east side, and swimming pool in the south-west corner. The civic square is open at the point opposite Corporation street, which thus permits a view from the street of the existing woodland beyond the square. In his report the assessor Edward Mills referred approvingly to the compactness of the layout. It is a good scheme which provides a balance to the police station and market square at the further end.

The shopping centre, with a wide street as the main feature and shops on either side, follows the traditional arrangement resulting from the haphazard grouping of shops on either side of a main traffic thoroughfare. It is, however, a bad tradition to follow for a modern shopping centre, as it perpetuates the mixture of traffic and pedestrians which is one of the serious disadvantages of modern urban life. In their plans for town and shopping centres many enlightened planners design for a separation of pedestrians and motor transport as at Coventry, Stevenage and to a less extent at Harlow and Crawley. Corby centre cannot on the other hand be regarded as a good example of a modern town or shopping centre. Traffic should only move to, and not through, a centre, and car parks are provided on the periphery for this need. One good feature in the plan, however, is that the market square is neatly tucked away on one side of the shopping highway and makes a safe precinct with close proximity to the bus station. The centre is architecturally pleasing and in many of the buildings there is canopied protection for shoppers.

INDUSTRIAL AREAS

Of the two industrial areas most building has taken place on the St. James Estate south of Corby Village. This is the smaller of the two and is devoted to light industry while the larger estate to the north at Earlstrees is devoted to heavier industries. Some of the industries accommodated on the St. James' Estate are electric light filaments, ribbons and industrial tapes, sheet mica, shoes, biscuits, clothing, and vehicular trailers. Most of the factories have been built by the corporation, but there is nothing particularly noteworthy either in the buildings or the layout.

SOCIAL AND ECONOMIC ASPECTS

The great task of making Corby a happy and successful town in the future would seem to depend on securing a greater variety both of

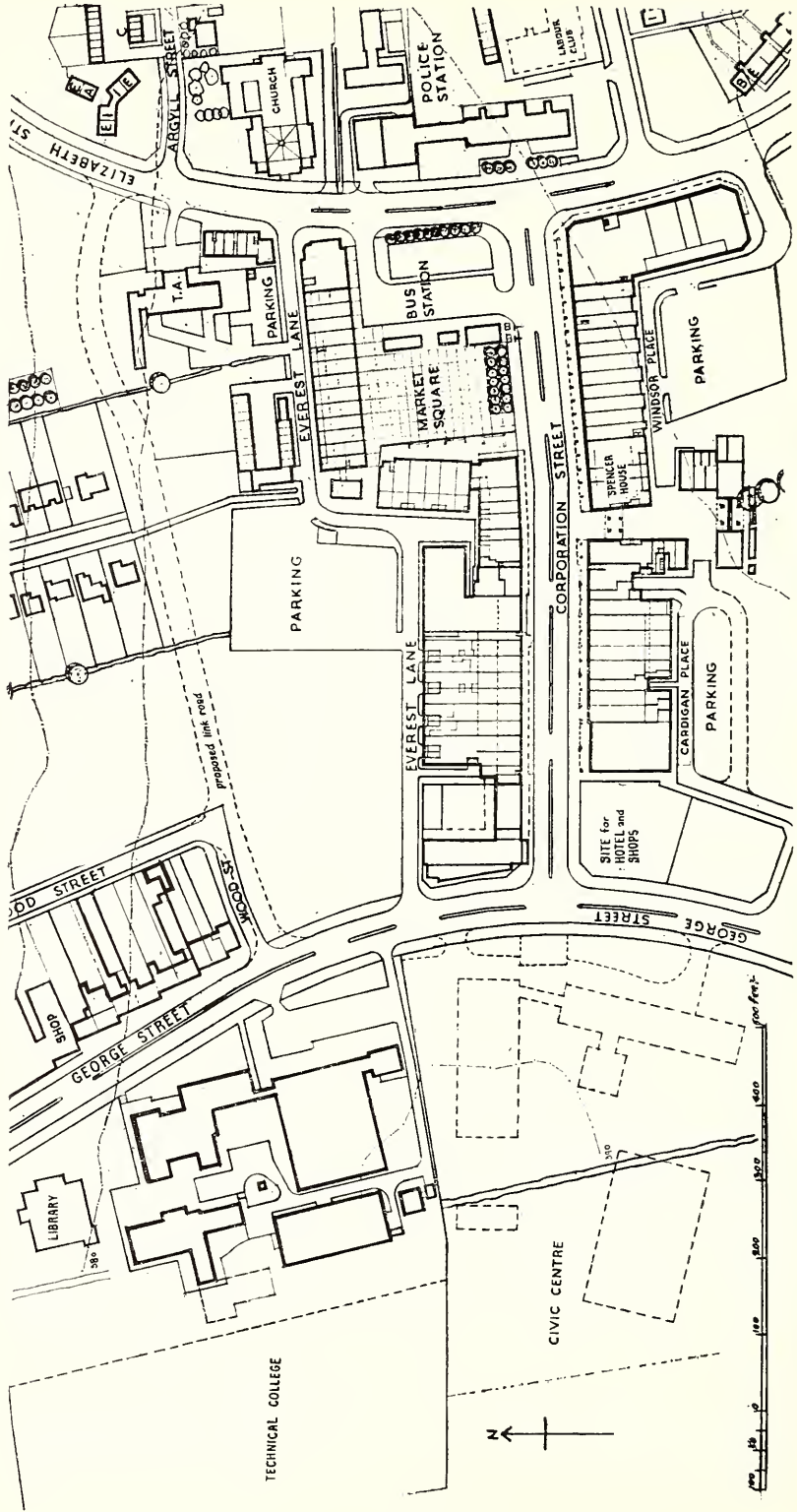


FIG. 61—Corby Town Centre.

employment and of cultural and recreational interests. Up to about the end of 1956 it was practically a one-industry town with the Scottish workers of Stewarts and Lloyds having a strong influence on the pattern of social life. By the end of 1962 some headway had been made with the introduction of new industries, so that nearly 3,000 people were employed in them; but this is only a small proportion compared with the 11,000 employed in the steelworks. It is impossible to forecast the future of steel production in England; it may be a rosy and long one, but nevertheless it is bad for a town to depend mainly on one industry; there must be a balanced variety if the shocks of industrial depression are to be minimised. To make the future of Corby economically and socially healthy it is important to introduce a variety of other industries employing as many as are employed in the steelworks. This might be realised with the extension of the area in 1963 and the increase of population ultimately to 75,000.

Chapter XXVI

CUMBERNAULD

ONE of the largest areas of urban congestion, with some of the worst housing conditions in Great Britain, is to be found in Glasgow, which has therefore a very large potential overspill population. In 1946 the Clyde Valley Planning Advisory Committee recommended the enlargement of certain small towns and the building of new ones to relieve this congestion, and one result was that the building of East Kilbride 8 miles south-east of Glasgow was begun in 1947. This was originally planned for a maximum population of 45,000, but has since (1960) been raised to 70,000, and as the previous population was only 2,500, it provides for a substantial migration from Glasgow making available about 18,000 houses. But that would obviously only partially meet the overspill needs. Although the Glasgow City Corporation had built 36,000 houses in the city between the end of the war and 1955, this still left a housing need of at least 100,000, of which, it was estimated, 41,000 were required by families without separate homes. In the 1951 Census it was shown that 48 per cent of dwellings in the city had only two rooms or less, while the average gross density in the centre was 400 persons to the acre.

It was estimated in 1952 that sites for about 40,000 houses could be found within the city boundaries, but that the remaining 60,000 would have to be found outside the city. The Clyde Valley Planning Advisory Committee was therefore asked in 1953 to consider and report on the measures to be taken to secure sites outside the city, and in April 1954 the committee recommended that a new town for 50,000 should be built at Cumbernauld to take Glasgow overspill.¹ The recommendation was accepted by 18 local authorities including Glasgow Corporation and the Dumbarton County Council. In consequence the new town of Cumbernauld was designated on 9th December 1955.

The site of 4,150 acres is about fourteen miles north-east of Glasgow, in the County of Dumbarton and in the area of the Cumbernauld District Council. There are two villages on the site: Cumbernauld with a population of 1,900, and Condorrat with 1,200. The site is roughly triangular in shape, about 5 miles long from south-west to north-east, and up to 2 miles wide. It lies on the south-east side of the main trunk road from Glasgow to Stirling, the A 80, with a small area projecting on the other side of the road at the north-east end, part of the boundary

¹The information is based on the Memorandum by the Secretary of State for Scotland on the Draft New Town (Cumbernauld) Designation Order, 1955.

being near the Antonine wall. The A 73 runs south-north through the site and joins the A 80 a little east of Cumbernauld village. The railway from Glasgow to Stirling passes through the site about $1\frac{1}{4}$ miles from the road with which it runs roughly parallel for about $2\frac{1}{2}$ miles, while another line to Edinburgh runs about $1\frac{1}{2}$ miles north of the A 80.

The site is hilly. Both the road and railway traverse valleys, and between them is a long hill running parallel with the site. Rising to about 480 feet and about 220 feet above the road, it has a fairly level top; the slopes are steep on the north-west side towards the road, but much gentler on the south-east side towards the railway. There is a small hill a little over 500 feet high to the east, another at the north-east end, and a small one by the village of Condorrat at the south-west end. The hilly nature of the area affords extensive views in all directions, but particularly fine to the west and north towards the Kilsyth Hills. There are coal workings west of the A 80 and in the vicinity of Condorrat, and fireclay workings in the north-east and south-east of the area, which have some influence on the development of the town, while the nature of the site restricts building to certain areas.

OUTLINE PLAN

Preliminary planning proposals were published in April 1958, with several outline diagrammatic plans, and the First Addendum Report appeared in May 1959 in which several amendments were made.

The original maximum population of 50,000, was raised in April 1960 to 70,000 and it is calculated that four fifths will come from Glasgow. The intention is that 50,000 would form the hill town and the remaining 20,000 would occupy surrounding villages. One of the main factors that determines the overall plan, according to the development corporation, is the character of the site and the comparatively small amount that can be used for building which has led to a high-density compact plan. In the original plan for a maximum population of 50,000 only a comparatively small proportion, some 1,859 acres, out of 4,150 acres, was to be used for the actual town and this included 582 acres of open space. With the increase of the maximum population to 70,000 these figures are being proportionately increased on the same principles, so that 2,783 acres will be allocated to the town. The remaining 1,367 acres, which includes the existing villages of Cumbernauld and Condorrat, will be reserved for a golf course, a camping and caravan site, wooded areas and a few remaining pieces of farmland all of which merge into the broader green belt lying outside and surrounding the designated area. The green belt is controlled jointly by the development corporation and the County Planning Authority.

It is difficult to be persuaded that the high-density plan that has evolved results mainly from the necessities of the site, and not rather from a theory of compact urban development. A lower density with the same population could probably have been secured by taking a little more of the total area especially as the 2,783 acres allocated for the

CUMBERNAULD

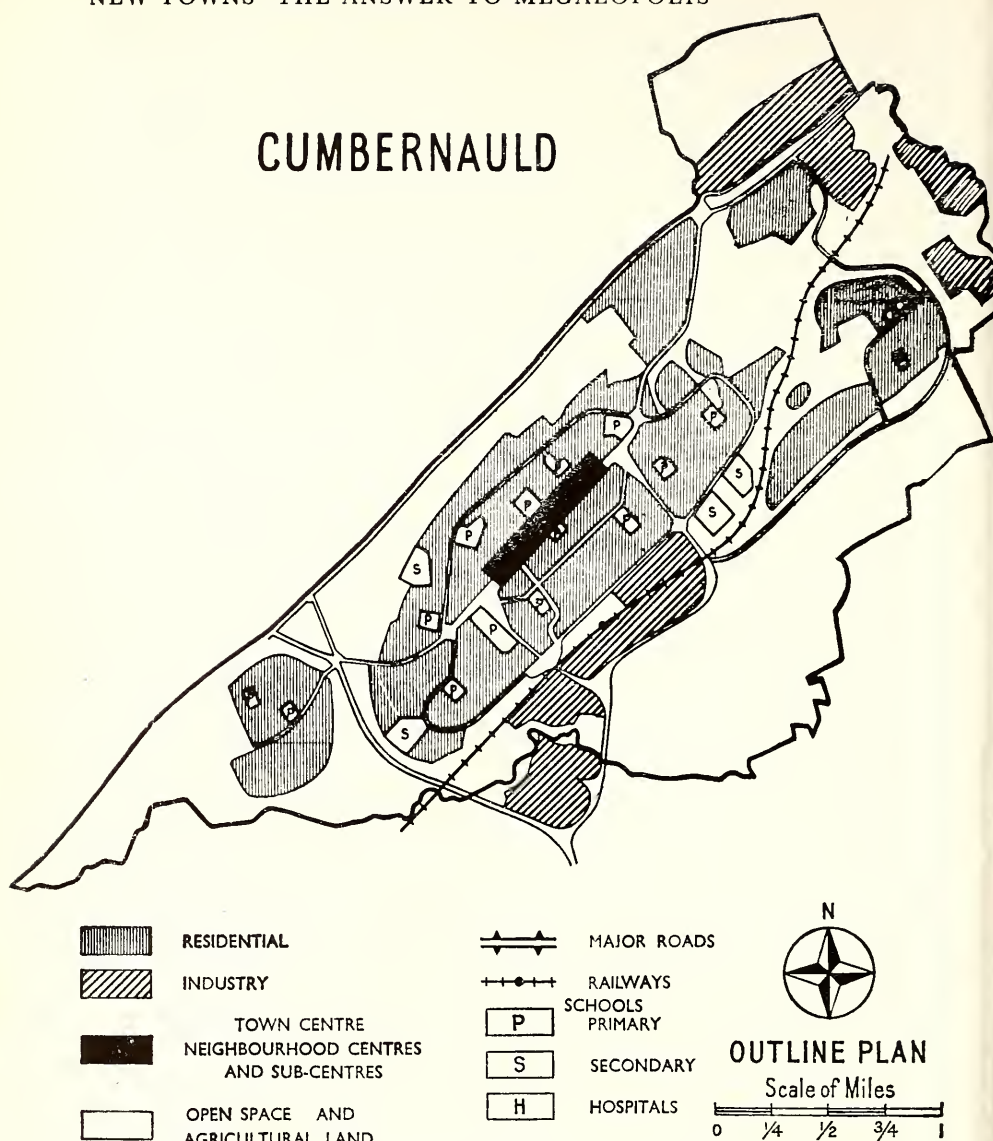


FIG. 62

town includes 582 acres of open space, and that of 4,150 acres only 820 acres is taken for housing. Alternatively a lower maximum population could have been the aim. It is therefore important to examine the plan on the basis of good and desirable social conditions.

Everything in the plan is directed to securing a compact urban unit of 50,000 to 70,000. The main long hilltop running north-east to south-west is taken as the centre of the town. The road system originally consisted of outer and inner ring roads, fed by radial roads, the inner ring encircling the town centre, but a later modification abandoned the inner ring road and substituted a main spine road to join the A 80, south-west and north-east of the town. This spine road passes through



(a) Seafar 1—view to north down main footpath.

(b) Kildrum 5 Many spaces are almost enclosed by flat buildings, and footpaths run through which are designed to connect most parts with the centre of town.



(c) Children's playground in space between houses in Muirhead 4.

Plate 59.
Cumbernauld.





(a) Split-level houses at Seafar 2.



Plate 60.
Cumbernauld.

(b) Rows of houses at Kildrum 3.

(c) Group of houses at Kildrum 5.



the town centre, which is planned on a number of levels, including an upper pedestrian and a lower road level. The road pattern and the conception of the centre seem to be excellent in every way, especially as the latter will secure the much desired segregation of pedestrian and vehicular traffic. This segregation is continued in many parts of the town by a system of footpaths completely separate from the road system. The idea is to have residential areas linked on one side to a main road, giving access for vehicles, and on the other to a pedestrian way leading to the centre. Along the pedestrian ways will be the primary schools, churches, halls, public houses, all provided with separate service-road access. It is an adaptation of the Radburn plan discussed in Chapter XXI.

The aim being a compact urban unit the neighbourhood pattern, which is a feature of all the other new towns, is not adopted. In the preliminary planning proposals certain criticisms of neighbourhood planning are made. It is stated that with the self-contained neighbourhoods in many towns 'the inhabitants are encouraged to look inwards towards the local centre instead of visualising the town as a whole, to the detriment of the creation of civic pride which should be one of the advantages of a medium sized town'. There is some validity in the criticism, for this thinking of the neighbourhood as one's town rather than that of which it is a part has been experienced, for example, at Crawley; but if neighbourhood and town centre are satisfactorily related the integration of neighbourhood with the town should be constantly apparent to the active members of a community. However, in the case of Cumbernauld, the character of the site is given as one reason for not adopting the neighbourhood system of planning, as it requires 'that the main development should be compact and distances between sections of the town should be short'¹ and that major facilities should be concentrated in a central area easily accessible to all the inhabitants.

Shopping would thus be concentrated mainly in the centre of the town, but provision is to be made for individual shops for day-to-day needs in the residential areas furthest from the centre, in the ratio of about one shop to 300 dwellings, those living in the inner areas of the town being able to use the town centre for all their needs. It is proposed that the shops in the centre should be in a pedestrian precinct, 'for,' to quote from the Preliminary Planning Proposals (1958—p. 18) 'by taking advantage of the hilly site at Cumbernauld it should be possible to provide a multi-storey centre with pedestrians and vehicles on different levels, with ample car parking facilities within easy walking distance of the shops and a separate system of service roads. The centre should be planned to provide shelter from wind and rain and if possible warmth in the winter. To create a lively, busy atmosphere the spaces between the shops should be restricted in width and related to the height of the buildings, which need not be of more than two storeys. It is felt that the scheme should be based on the pedestrian shopping street

¹Preliminary Planning Proposals, 1958, p. 5

rather than the market square.' If the pedestrian streets are narrow, as this description indicates, and there is no square—it need not be a market square—the effect might be rather monotonous. Any monotony in the streets of Venice is avoided by a profusion of small squares, which often come as delightful surprises. A square here and there, part garden, with a few trees, could make the difference between a dull, monotonous centre and a varied and interesting one.

The actual detailed conception of the town centre was not to take definite shape until four years later, in 1962, and it has proved to be an imaginative conception of much interest that would seem to provide scope for a good deal of variety. It could be described as a vast departmental store, part open and part enclosed. The whole of the lowest level is for vehicular traffic and parking, and above this is a series of pedestrian decks reached by escalators, stairs and lifts. The whole vast construction would comprehend shops, offices, public and entertainment buildings a hotel and some housing. Being on the hilltop glimpses of the surrounding country from different pedestrian levels could be enjoyed. The centre would extend beyond this main construction to include churches, a hospital, a swimming pool and open-air recreational facilities.

The two main industrial areas are in the north and in the south, of similar size. The former borders the trunk road on the north-west side at Tollpark, while there is a slightly smaller area on the south-east side

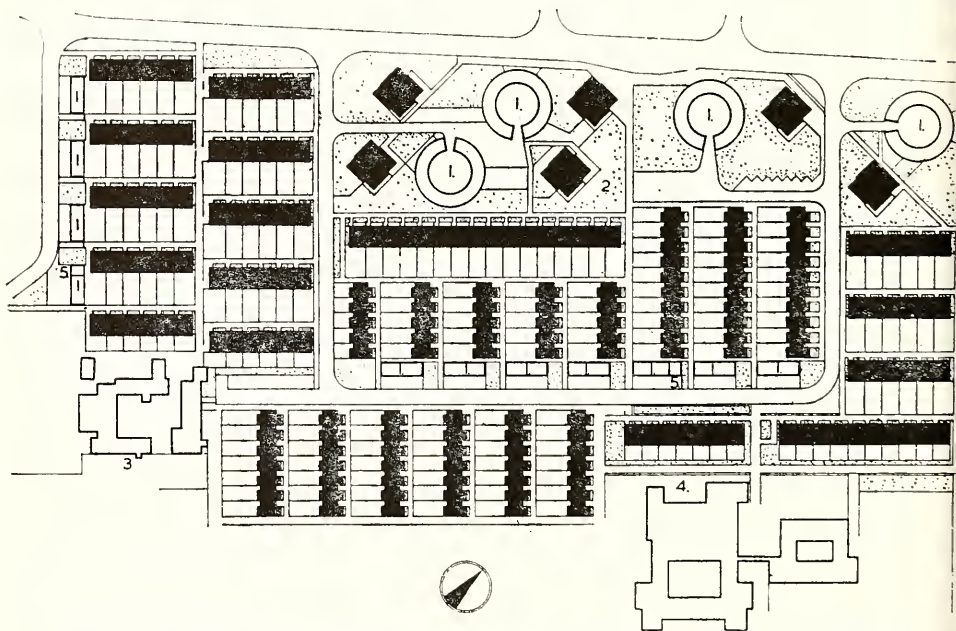


FIG. 63—Cumbernauld—Housing Layout at Kildrum 3 designed by L. Hugh Wilson, architect to the development corporation.

- Key 1—Lock-up garages.
2—Children's play area.
3—Kildrum Farm.
4—School site.

of the road at Wardpark. The southern industrial area borders the railway on the south-east side at Lenziemill and Blairlinn, and spreads to the north-west side in the region of Carbrain, Greenyards and the station.

HOUSING AND RESIDENTIAL AREAS

A considerable diversity of housing is proposed, from two-storey dwellings with and without gardens to tall tower blocks of flats, probably of eight to twelve storeys, with a few four-storey or five-storey blocks. The decision to build in this way is partly influenced by the nature of the soil, particularly on the north side of the hill, which may necessitate expensive foundation work for buildings of more than two or three storeys in height. 'To attain full value from such additional work' it is asserted, 'it would be desirable to build at considerably greater heights so that the extra cost of foundations is spread over a larger number of dwellings' (Revised Preliminary Planning Proposals 1959, p. 8). A further justification for tall blocks of flats is given in the First Preliminary Proposal (1958, p. 9) where a social survey carried out by the London County Council in connection with high blocks of flats mentions that 'tenants referred to the advantages of being on the upper floors—better atmosphere, greater quiet and privacy and improved outlook'. According to the proposals the two-storey houses would be built on the gentler slopes of the main hill on the south east side, and on the flatter land. The tower blocks of flats would be built mainly in the inner areas. Thus the higher densities of about 120 persons an acre would be nearer the centre, and the lower densities of about 70 an acre towards the outer areas. In the revised proposals in the First Addendum Report of May 1959 the density pattern was worked out as follows:

10.3 acres at	44 persons an acre=	457 persons=	13.5 houses an acre
105.5 " " "	66 " " "	= 6,947 " "	= 20.3 " "
10.6 " " "	70 " " "	= 742 " "	= 21.5 " "
15.6 " " "	75 " " "	= 1,168 " "	= 23.1 " "
13 " " "	77 " " "	= 1,001 " "	= 23.7 " "
348 " " "	80 " " "	= 27,840 " "	= 24.6 " "
62 " " "	100 " " "	= 6,200 " "	= 30.8 " "
22 " " "	120 " " "	= 2,640 " "	= 37.0 " "
Town Centre		3,500	
		<u>50,495</u>	

When the maximum population was increased to 70,000 in 1960 densities were slightly revised as follows:

8 acres at	42 persons an acre=	322 persons=	12.9 houses an acre
60 " " "	55 " " "	= 3,300 " "	= 16.9 " "
394 " " "	70 " " "	= 27,639 " "	= 21.5 " "
121 " " "	75 " " "	= 9,056 " "	= 33.1 " "
40 " " "	80 " " "	= 3,199 " "	= 24.6 " "
108 " " "	85 " " "	= 9,073 " "	= 26.1 " "
27 " " "	90 " " "	= 2,485 " "	= 27.7 " "
61 " " "	120 " " "	= 7,260 " "	= 37.0 " "
Town Centre		5,720	
Existing villages		2,300	
Infilling in villages		2,250	
		<u>72,604</u>	

NEW TOWNS—THE ANSWER TO MEGALOPOLIS

We have added the last column on the basis of average family size of 3·25. (The average on the basis of the 1961 Census for England and Wales was 3·13.) The average net density over the town is 85·5 persons an acre which means about 26·3 houses an acre.

As building proceeds these densities are being amended¹ but the essential principle of close compact development remains.

It will be seen therefore that Cumbernauld is to be a high-density town consisting of a considerable number of tall tower blocks of flats, possibly eight to twelve storeys, a few four-storey or five-storey blocks, with fifty per cent of the total being two-storey terrace houses, with and without gardens. Such gardens as are provided must be exceedingly small at the intended densities.

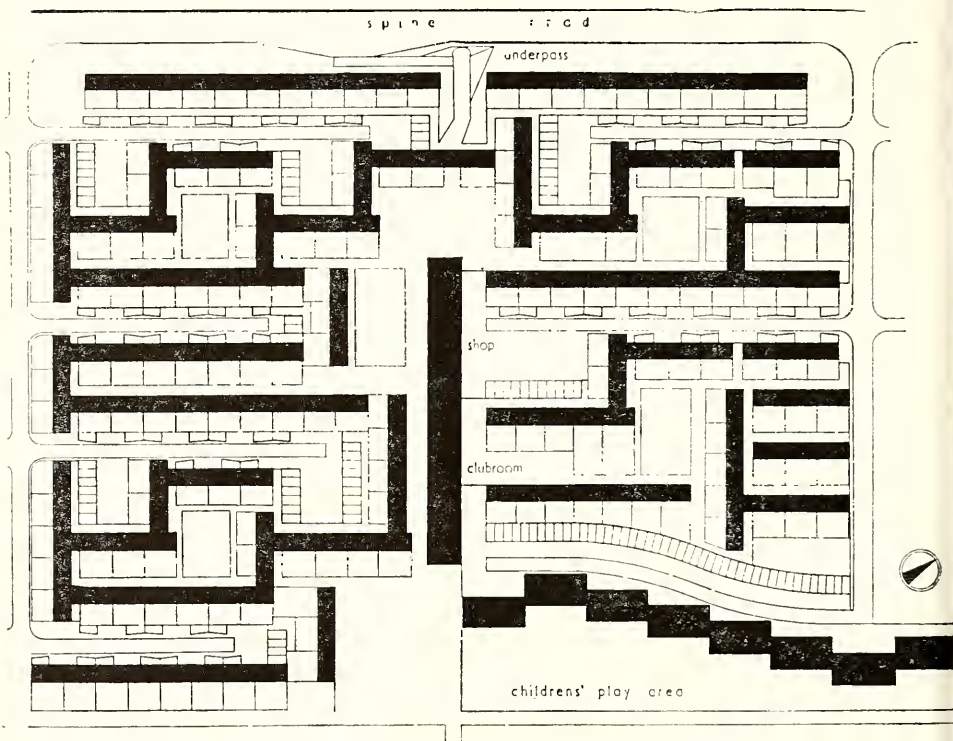


FIG. 64—Cumbernauld—Housing layout at Carbrain 1.

The question that must be asked is whether this plan provides the accommodation and living conditions that families with young children want, or whether something better could not have been done without extra cost. It is almost an axiom that the majority of families want to live in a two-storey house with a garden; that is the experience in all parts of Great Britain, and of all the development corporations. The proportion varies with different parts of the country; it may be a little higher in the south, probably about 90 per cent, and a little lower in the north, probably about 80 per cent, but it never fails to be a big

¹See 1962 report.

majority. If the Cumbernauld Development Corporation doubts this let them ask the people of Glasgow, for whom they are building the dwellings.

The well known preference for two-storey houses with gardens as opposed to flats is only obliquely mentioned in the Preliminary Planning Proposals, and there can be little doubt that the town plan emanates from theories of urban compactness which are not wholly based on social needs, and certainly not on the wishes of the average family. It is suggested in the Preliminary Proposals (p. 9) that 'opinions differ very much on the willingness of tenants to occupy flats and probably it is true to suggest that people tend to prefer the kind of new house in which they live to the exclusion of other types'. That is a very doubtful statement because experience shows that even where people have lived all their lives in flats, they would much prefer a house with a garden, though such a dwelling is for many a dream that will never be realised. Again, if the Cumbernauld Development Corporation doubts this let it ask those living in the tenement blocks in Glasgow or in L.C.C. flats. The justification already mentioned for building high blocks is that anything above three storeys would need expensive foundations. The alternative is the obvious one; do not build above two storeys, and thus

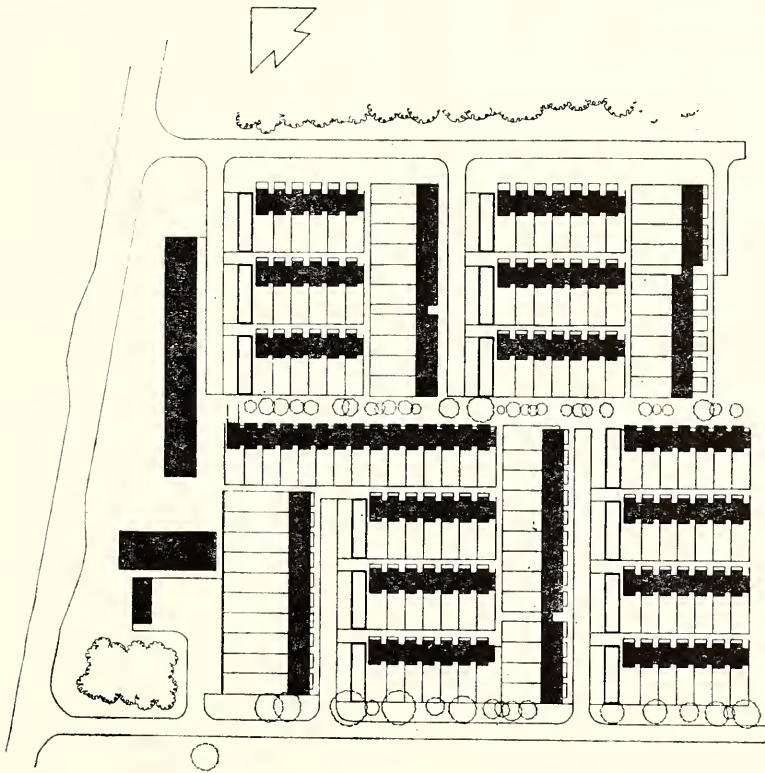


FIG. 65—Cumbernauld—Housing layout.

save the money that would otherwise be needed on expensive foundations, and either increase the area of land used for housing or reduce the maximum population. There is plenty of space well north of Glasgow for more new towns if Cumbernauld is inadequate.

There is little dispute that good architectural effects and good grouping can be obtained with tall tower blocks of flats set in gardens and disposed in relation to slab blocks of three and four storeys and to rows of two-storey terrace houses; but architectural effect is not the starting point of planning. In housing the starting point should be family needs and if possible family wishes, which are hardly best satisfied by so high a proportion of flats and by such high densities as is proposed at Cumbernauld. Good architectural effect, though it comes after social needs are satisfied, is not incompatible therewith. On a hilly site such as Cumbernauld the risk of monotony in two-storey houses is very much less than on a comparatively flat site, because the hills provide variations in height, and afford diverse views between the housing blocks.

BUILDING THE TOWN

The programme of building has been mainly from the north-east to the south-west. The first building, which indicated the start of the residential areas, was the large factory at Old Inns in the north-east for Burroughs Machines Ltd. Negotiations with the appropriate Government department for the building of this factory were already proceeding at the time of the designation of the new town. The company was granted 72 acres and commenced to build its factory in July 1956. The first part was in production in January 1958, and in March of that year 350 persons were employed. Other parts of the factory were completed later and by 1960 about 1,200 persons were employed. This meant a demand for houses in the vicinity, and the development corporation thus commenced building houses in Kildrum at the north-east end in answer to this demand. The policy of the corporation is to attract diverse industries, and it is itself building standard and flatted factories for letting in addition to the special purpose factories that many larger firms will wish to build. Two such standard factories have been built at Blairlinn, a little outside the south boundary. These factories are each of 22,000 sq. feet, but can be enlarged by the addition of standard bays to 80,000 sq. feet. A flatted factory has been built at Seafar, near the projected town centre, and a group of service workshops at Muirhead. In 1962 there were thirteen industrial concerns occupying factories in Cumbernauld, which included in addition to Burroughs Machines Ltd., Thames Board Mills Ltd., Fort Alloys Ltd. and Smith Fullerton & Co. Ltd., an old established Glasgow firm producing marine diesel fuel injection equipment that is transferring completely to Cumbernauld.

The first houses were built in 1959 and by the end of 1962 1,734 were completed of which 1,677 were provided by the development corporation. This seems slow progress in view of the needs of the Burroughs Machine factory, but there was apparently some acceler-

ation at the beginning of 1963 as 2,156 houses were then under construction all likely to be completed in that year.

Most of the houses completed by the end of 1962 are in the areas north-east, north-west and south-west of the centre in the Kildrum, Seafar, Muirhead, and Carbrain districts. The Kildrum area, at the north-east end of the town is just south of Cumbernauld House which has been acquired, with its grounds and policies, as an amenity for the new town, the house being at present occupied by the offices of the development corporation. The houses and layout of Kildrum, the first residential area, consist of very varied groupings of two-storey terrace houses, four-storey and five-storey slab blocks of flats, and five-storey tower blocks. The area is approached by a road running off the A 73. South of this road are some rows of terrace houses, all facing one way on to footpaths which run transversely to the roads. On the north side are groups of four-storey and five-storey slab blocks arranged to enclose squares of grass or gardens, with one corner of two-storey terrace houses, similarly grouped. The blocks of flats are designed with the depressing gallery access for which their bright colourful facades hardly make amends. Nearby is a group of 6 five-storey tower blocks, and near these are 39 single-storey patio houses each with a garage, arranged in rows on either side of pedestrian areas with service roads at the back, a slight reminiscence of the Radburn layout. Garages are provided for each dwelling in the tower blocks, arranged in circles with a small break for the entrance.

In the part known as Kildrum V blocks of three and four-storey flats are planned in a series of hexagons, with an opening breaking into two sides. This makes a number of enclosures which in a hilltop town in a northern region provides protection from cold winds. An interesting feature is that through these enclosures running under the blocks are footpaths that traverse the whole length of the town from the outskirts to the centre.

The layouts in the other area are made with a view to seclusion from traffic, good orientation and compactness, and the housing represents some ingenious designs. Some of the layouts are illustrated.

Cumbernauld at the end of 1962 was, with nearly 1,750 houses completed and 6,000 population, only in the very earliest stages of building, and there was then hardly more than a tenth of the town to show, although that tenth could be taken as some confirmation of the plan that is proposed for the town. It has therefore not been possible to do much more than express an opinion of the proposals. While regretting the very high densities in the housing areas and the absurdity of taking only 820 acres of 4,156 for housing, and the high proportion of flats, which do not represent the living conditions that are most acceptable for family life, it must however be acknowledged that from the standpoint of traffic, both vehicular and pedestrian, it is an excellent plan, and promises the segregation of both, more completely than any of the other new towns.

Chapter XXVII

SKELMERSDALE

LIVERPOOL is one of the most congested of cities, and outside London it has the highest population density of the English conurbations, with some of the worst slums. Handsome public buildings in close proximity to squalid dwellings is a familiar yet melancholy spectacle there. The city population in 1961 was 747,490 in 27,810 acres compared with Manchester's 661,041 in 27,255 acres, Birmingham's 1,105,651 in 51,147 acres, Leeds' 510,597 in 40,615 acres, and Sheffield's 493,954 in 39,586 acres.

With the surrounding towns of Bootle, Crosby, Huyton-with-Roby, Kirkby and Litherland, the conurbation of 1,030,000 has about 80,000 slum or obsolescent dwellings which should be replaced as quickly as possible. But these are so mean and at such a high density that it would be impossible to rehouse the people in the same areas consistent with a standard of accommodation decent and acceptable to the majority; and a large proportion, therefore, would have to move elsewhere. As there is little room in other parts of Liverpool or in adjacent districts, and as it is vital to preserve a green belt round so congested a city, it is the right step to provide accommodation and work in the form of a new town some miles away. The local authorities in the region have long realised this, and Skelmersdale and district about thirteen miles north-north-east of Liverpool being considered a suitable place, was proposed in 1956 as a new town in the Lancashire development plan. Although sympathetic to the proposal the Minister of Housing and Local Government did not then approve of this being done under the New Towns Act, and in consequence local authorities began to prepare schemes for overspill under the Town Development Act 1952.

In 1960 the Minister reverted to the proposal of the Lancashire development plan because he realised that procedure under the Town Development Act would place a strain on local authorities, and would be unlikely to ensure development on the scale and at the speed required to satisfy the urgent housing needs. After preparing a draft outlining the scheme and holding the necessary enquiry into objections, the Minister designated an area of 4,029 acres as the site for the new town of Skelmersdale on 9th October 1961, the first new town to be designated in England for eleven years. With the designation of Livingston and Dawley and proposals for new towns at Runcorn, Redditch and another near Manchester, there is a welcome return to the policy of building new towns to relieve congestion in cities. It is proposed to plan

a town at Skelmersdale for about 50,000 expected ultimately to grow to 80,000. The population of the designated area in 1961 was about 8,000, mostly in Skelmersdale (6,300).

The site lies roughly midway between Ormskirk and Wigan, about four miles to the east of the former with its population of 22,000 and about six miles west of the latter with 79,000. It will be seen, therefore, that it is very close to a town at present about the size of its proposed maximum, and one of the objections of the Wigan County Borough Council was that the new town will be so near its western boundary as to become a continuation of its urban area. The reply of the Minister was the difficulty of finding an alternative site to take the urgent over-spill from Liverpool, that was not open to even greater objections. It is to be hoped that a green belt, at least two miles wide, between Wigan and Skelmersdale will be sacrosanct.

The site is on the eastern edge of a valuable agriculture region and is gently undulating, except for Ashurst Ridge along the north-east boundary which rises to a height of about 550 feet and which includes the beautiful Ashurst Beacon, lying just outside the designated area, affording extensive views of the surrounding country. Local authorities in the region hope that this will be preserved as an amenity, and the Minister has indicated that the vicinity of Ashurst Ridge might suitably be used for playing fields and recreation.

Although the Liverpool-Wigan-Manchester Railway runs along the southern boundary of the site and the Ormskirk-St. Helens line runs along the western boundary, the former in 1962 had a very poor passenger service and the latter none at all. With a Government change of heart with regard to British Railways it is perhaps not too much to hope that reasonable services will be restored as the new town grows. The position of the railways in relation to the town suggests a convenient siting for industry.

The new town will be on the western edge of the South Lancashire Coalfield, but most of the mines in the vicinity are now exhausted. Within the boundary extraction is now limited to two small private mines working under licence from the National Coal Board, which will probably continue during the growth of the new town. As it will be built largely over a coal mining area one of the problems, as at Peterlee, will be subsidence. Other mineral extraction is that of sand for the glass industry and of brick clay, both of which occur in the south-east. The former may terminate during the building of the town, the latter will probably continue, but both occupy only small areas.

The development corporation for the new town of Skelmersdale was appointed in January 1962.

Chapter XXVIII

LIVINGSTON

As mentioned in the chapter on Cumbernauld there was in 1955 a need in Glasgow for about 100,000 new dwellings of which 40,000 could be provided within the city, but 60,000 would have to be found outside. Although the new towns of East Kilbride, Glenrothes and Cumbernauld are making a substantial contribution to receive this overspill, it is not enough. To fulfill the housing programme another thousand houses a year would, it is estimated, have to be provided outside Glasgow. It was therefore necessary to find another site and choice has fallen on the Livingston district about thirteen miles west of Edinburgh between Bathgate and Blackburn to the west and Uphall and Mid Calder to the east. The site of 6,692 acres was designated on 17th April 1962. In addition to relieving the congestion in Glasgow and of providing dwellings at acceptable densities in exchange for slums, a new town in this region will revitalize what had largely become a neglected area.

The population proposed for the new town is about 70,000 which for the area designated would allow space for parts of the green belt within the boundary. The designated area is roughly square in shape with a tongue pointing southwards. The northern half is in West Lothian and the Southern in Midlothian. The site is beautiful, undulating agricultural country with pasture land and scattered woods. It slopes gently from the north to the river Almond which flows through the centre of the site from west to east. On the south side of the river the country is a little flatter and a little beyond the southern boundary are the Pentland Hills. On the fast-flowing river Almond are several small weirs, and it can be imagined that the river offers scope for the provision of an interesting water garden. There are large shale heaps, or bings as they are called in Scotland, in various parts of the region which are survivals of the shale workings in this part. The few within the site may offer a problem to the planner, for their removal would be a too expensive undertaking, but ingenuity may turn them to an interesting use.

The east-west communications are excellent. The A 8 Edinburgh to Glasgow trunk road runs for a little over four miles along the northern boundary, and the A 71 from Edinburgh to Kilmarnock passes through the southern part of the site with a western fork, the A 705 to Whitburn and on to Motherwell. A new road is proposed, which branches from the A 8, through the northern part of the town.

Two railway lines run through the site in an east-west direction: the Edinburgh-Motherwell-Glasgow main line which passes through the southern tongue with the stations of Mid Calder and West Calder on either side, and the freight line between Edinburgh and Glasgow which traverses the northern part of the site. Perhaps when the town is being built this line will also be open for passenger transport. The communications are much less satisfactory in a north-south direction, although these are better west of the town with the B 792 and the A 706, yet there is obviously scope for a new north-south road through the town linking more directly with Falkirk, Grangemouth and Barrowstounness.

A start for the town will be provided by the expanding works of the British Motor Corporation at Bathgate which will, it is expected, employ some 5,000. Many of the workers in this factory come some distance to work. Provision for them is being made in the small overspill villages of Blackburn, Whitburn and Polbeth but this will not be adequate. Also such a factory attracts linking industries, and it will be appreciated therefore that the industrial area of Livingston would seem to enjoy the prospect of a steady growth in the early days. With the reclamation of land after the shale workings and the removal of deserted buildings the new town should bring new life and grace to a rather neglected region.

Chapter XXIX

DAWLEY

THE West Midlands conurbation consists of the city of Birmingham, five county boroughs, Smethwick, Walsall, Wolverhampton, West Bromwich and Dudley and several other adjoining urban districts having a total population in 1961 of about 2½ millions. This was about 4·8 per cent more than in 1951, and, although the increase was slightly less than the national average of 5·3 per cent, in the five counties of the West Midlands—Herefordshire, Shropshire, Staffordshire, Warwickshire and Worcestershire—the increase was 7·5 per cent. This was due to migration from the conurbation. While Birmingham showed a slight reduction in population, some of the residential areas on the fringes like Aldridge, Solihull and Tettenhall showed marked increases. This is a parallel on a smaller scale to the County of London and Greater London and means a gradual decline in the congested centre and unplanned suburban sprawl.

A primary task for the future is to rehouse those living in the slums and congested central areas of the conurbation, to provide for the regional increase in population, and to do this in the way that is socially and economically the most satisfactory. It will probably be necessary to provide by 1981 for at least a half a million persons.

Existing congested slum areas are at such high densities that if the rehoused population is to enjoy improved standards a substantial proportion will have to be rehoused elsewhere. The extent of the resulting dispersal has been variously estimated, but one that appears to be reliable is that given in a memorandum outlining a policy for the West Midland Region and submitted to the Minister of Housing and Local Government by the Town and Country Planning Association and Midlands New Towns Society in September 1961.¹

In this informative and well-balanced memorandum it is stated that it is urgently necessary 'to plan the location beyond the green belt (round the conurbation) and provision over the next twenty years (1961–1981) of houses, workplaces, schools, shops and all the related requirements of modern life for over 300,000 people from the West Midlands conurbation.' The Local Government Commission estimated the overspill problem of the conurbation at about 400,000 for the same period.

The Association and the Society proposed that the overspill should

¹See *Town and Country Planning*, Vol. XXX, pp. 387–399, October 1961.

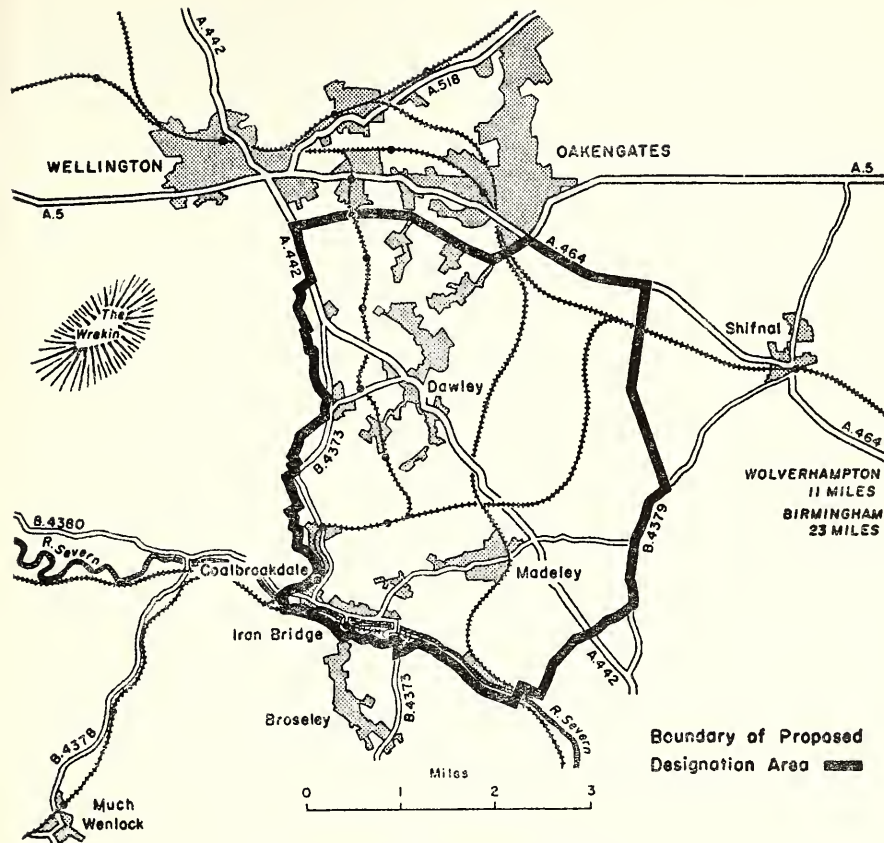


FIG. 66—Site of Dawley new town.

be accommodated in two or three new towns and by the expansion of several small towns in the West Midlands region. The new towns proposed were Dawley in Shropshire, one in the Woofferton-Orleton area on the Shropshire-Herefordshire border and a possible third in the vicinity of Swynnerton in Staffordshire. It was suggested that Dawley and Woofferton should be increased in size by 50,000 each, and a list of town-expansion schemes was proposed that would take another 150,000, making an overspill total of 250,000, which leaves at least another 50,000 for which provision would have to be made. These proposals of the Town and Country Planning Association and the Midlands New Towns Society would have been of more value, we think, if more new towns had been proposed and fewer town expansion schemes, for the New Towns Act is a much more workable medium than the Town Development Act. Several of the towns proposed for expansion are small like Leamington, Ross-on-Wye, Bridgnorth, Ludlow and Droitwich, all of which should be investigated as possible sites for new towns.

At the time this memorandum was being prepared, Mr. Sheppard Fidler, the Birmingham City Architect, was making a survey of Dawley

and its surroundings as a possible site for a new town, and Mr. Fidler's report indicated that, in spite of certain anticipated site difficulties that could be overcome with some additional expenditure, the region offered good scope for a new town. The Minister's decision to issue a draft designation order for the new town of Dawley in September 1962, which was confirmed on 16th January 1963, followed Mr. Fidler's report, but was also probably encouraged by the memorandum of the Town and Country Planning Association and the Midlands New Towns Society.

The area designated is 9,100 acres and a population of 90,000 is proposed with scope for further increases. The existing population is about 20,000. About eleven miles west of Wolverhampton, twenty-three miles north-west of Birmingham and thirteen miles east of Shrewsbury, the site is roughly square in shape with the existing town of Dawley slightly north-west of the geographical centre. The northern boundary runs south of Wellington and Oakengates, and the river Severn runs just inside the southern boundary. This is a particularly lovely stretch of the river, and it is to be hoped that it will be preserved unspoilt as an amenity for the new town. Crossing the Severn here is the famous iron bridge, the first of its kind in the world, which gives its name to the village. The ground rises steeply from the river to an undulating plateau some 300 to 500 feet above the river. In the western part of the site are several small hills which originated as the spoil-heaps of former mineral workings. These are now covered with vegetation and are to some extent integrated in the landscape, but they offer something of a problem in the planning, a problem which should not be too difficult to solve with the size and power of modern earth moving machinery. The land in the eastern part of the site is mainly agricultural.

The area is well served with communications both rail and road. A main line from Wolverhampton to Wellington runs along the north of the site, another line runs south along the river Severn, and there are three lines connecting the two, but to what extent these will be curtailed in view of railway policy since 1952 it is difficult to say. The building of a new town here may serve to maintain or revive them. The A 464 road from Wolverhampton to Wellington traverses the northern boundary, while the A 442 from Bridgnorth to Wellington runs through Dawley. There is a considerable network of minor roads in the area.

The question arises whether a population of 90,000, with prospects of further expansion, is not too large for a new town in this position. Immediately outside the northern area there are the built up areas of Wellington and Oakengates, which together have a population of 26,000. Immediately beyond the southern boundary is an urban tongue running south from Iron Bridge, while three miles to the south-west is Much Wenlock with a population of 15,000. Only $1\frac{1}{2}$ miles beyond the eastern boundary is the small town of Shifnal with about 14,000. It can be seen, therefore, that if a town of 90,000 or more is built in the region,

it will gradually combine with the surrounding urban areas to make a town of at least 150,000 and possibly more.

The Town and Country Planning Association and the Midland New Towns Society on the other hand proposed an additional population of 50,000 for Dawley, which would have meant a new town of 70,000, a much better size.

In the draft designation order the site was 10,035 acres and the inclusion in this of the agricultural land on the eastern part was a subject of objection by the Shifnal Rural District Council which represented to the Minister that the eastern boundary would transfer some 3,000 acres of Shifnal R.D.C. territory to the new town practically all of which was good agricultural land, and it suggested that rather more than half this should be excluded by drawing a new boundary further west. The site was reduced to its 9,100 acres by the deletion of 820 acres of this agricultural land, and of 115 acres of industrial land to the north.

In view of the built up character of much of the region, we think it would have been better to have limited the size of the town to 70,000, and because of the magnitude of the necessary dispersal from the Birmingham conurbation to designate as soon as possible at least three more new towns in the West Midlands. The proposal of Redditch is one, but this is in the wrong place because, as it is only $3\frac{1}{2}$ miles from Birmingham, there is a danger that it will contribute to the spread of the conurbation.

Chapter XXX

THE AESTHETIC ASPECT OF URBAN ENVIRONMENT IN NEW TOWNS

WHAT are the qualities that make a city or town visually agreeable and sometimes beautiful¹, that thus contribute to making it a pleasant place in which to live? And to what extent have the planners of the new towns succeeded in providing these qualities?

Aesthetic experience, which often has a vaguely sensed yet powerful effect on the mind, is based fundamentally on abstract relations, that is, the relations of objects apart from what they are or the function they perform, as, for example, the coloured shape in a space apart from its identity with, say, a table in a room, or a monument in a public square. With cities and towns, therefore, the basis of aesthetic experience is the formal relation of solids to voids, of bodies to space, the relation that is of the buildings and urban furnishings to the spaces they occupy.

These aesthetic considerations follow, or should follow, the primary functional conditions; and in the evolution of towns and cities the harmonious grouping of dwelling houses and other parts of the town round the market place with straight wide streets indicated, according to Aristotle, by the Greek planner Hippodamus, has persisted in most ages influenced by classical traditions of planning. Often the large city emerges as a combination of towns, to which is introduced a palatial centre or centres for the group. And so we find in cities and towns of all sizes similar urban elements, the streets opening to squares, the short or long perspectives of streets with terminal features, variations from the Greek chess board pattern in degrees of irregularity, the mixture of town and country in the form of parks and verdant spaces, and the varied urban furnishings occupying the spaces between buildings, which include the functional objects like lighting standards, traffic signs, kiosks, shelters, seats, railings, and the ornamental objects like sculpture and fountains—often with a commemorative purpose associated with the town. These furnishings often serve to punctuate space and make one more conscious of it. And from the aesthetic standpoint trees and shrubs should be included in ornamental furnishings, because they have a relation to space and buildings which can enhance aesthetic enjoyment in abstract formal relations by their skilful disposition. Trees, like sculpture which has an expressional purpose,

¹To some aestheticians 'visually agreeable' and 'beautiful' are the same, but the terms are here employed to indicate degree. A large residential area may be all visually agreeable with parts that arrest for the more positive character of their pleasing effects which elicit the term beautiful.

are something more than a decorative element, they introduce the sense of nature and the country into the town which is a spiritual refreshment, and this is a function which emphasises the importance of gardens.

In the relation of solids to voids the utmost variety consistent with an overall unity has usually been an element of aesthetic satisfaction. Unity, it should be emphasised, is the first essential and variety should always be comprehended within that unity. The satisfaction in unity or order has an instinctive basis which makes it important. It serves the instinct of self preservation, of security, for order conduces to security whereas disorder disturbs it. A town that gives a feeling of disorder to its inhabitants is really destructive of the sense of well being; a sense of order, on the other hand, contributes to making it a good town in which to live.

Variety, however, can add much. Generally in a city or town, especially if it is built to a high density, the buildings enclosing space in the form mainly of streets and squares or places are seen for the most part two-dimensionally as perforated walls, and it is in this way that many cities and towns have lacked variety. Where there has been an intermingling of buildings of some architectural distinction which can be seen three-dimensionally, with space all round them or on three sides, as many cathedrals and public buildings are seen, this has greatly enhanced urban beauty and interest. And if the floor of a town, its pattern of roads, pavings and lawns can occasionally be on different levels, connected by flights of steps or ramps, this also adds greatly to interest.

A sense of a unified whole can more easily be seen in smaller towns and cities, and when coupled with a pleasing variety and diversity of features the effect is generally delightful. It can be seen in such cities as Bath, Halsingborg, Verona, Bayonne, Hilversum and in considerable areas of larger cities such as Rome, and this sense of unity coupled with pleasing variety is strongly apparent in most of the new towns. It must be remembered that for their full visual effect to be experienced time is necessary, trees have to grow, the other ornamental furnishings, like commemorative sculpture and fountains can only come with time, a garden has to mature to become lovely, and the people have to grow their roots of pride; but even now in the interesting sculpture that can be seen in some of the new towns, in the layouts of buildings and their relation to lawns and gardens, they are aesthetically nearer in character to a finely composed city than most town development that had preceded them in the previous hundred years. Before that the Georgian urban scene had carried an urban dignity and grace.

The pattern of the new towns follows the pattern indicated by Hippodamus of houses grouped round a market place, neighbourhoods each with a centre of shops and many with a church and pub, and the neighbourhoods grouped round the large general centre, with shops, offices and public buildings, and the whole town furnished with decorative elements including trees and shrubs and lawns, or put another way, interspersed with the refreshing glimpses of the country. Further,

and this is what is so important in the building and spatial relations in the new towns, the layouts are such that instead of buildings being seen mainly two dimensionally as walls to streets and squares, a large proportion are seen three dimensionally. This gives a variety which makes the new towns aesthetically more interesting than many of the older towns of Great Britain.

A few examples should demonstrate the validity of these aesthetic claims. The first and aesthetically the most important is the designing and definition of space and the character of the defining buildings.

Only a few of the town centres were sufficiently complete by the end of 1962 for a fair judgement to be made, and of these Crawley, Stevenage, Harlow, Hemel Hempstead, Welwyn Garden City and Basildon are the most interesting, while all the new towns, with the exception of Cumbernauld, have spatial compositions of neighbourhood centres, and housing layouts, which afford interesting examples of the relations of solids to voids, and furnishings both functional and decorative.

Although the centre of Stevenage has the practical value of being a complete pedestrian precinct it is not entirely successful as a spatial composition. The town square which opens from the central pedestrian way is too crowded or too small. The pool of water, the clock tower, the trees and the elevated way overcrowd this small space. The scale of the clock tower is not very happy. For a square of this size with all the other furnishing a smaller more delicate object would have been more pleasing. The pedestrian ways are more agreeable, the perspectives are pleasing, and the heights of the buildings are happily related to the widths of the ways.

The feeling of exhilaration experienced when passing from the narrow streets of Venice under an arch to the magnificent Piazza San Marco is experienced to some extent in the town centre of Crawley when passing from under the arch in Broadwalk to emerge into Queens Square. It is a view that will improve with time and is one of the best spatial compositions that has appeared in England since the second world war, although a few factors rather tend to mar its excellence such as the somewhat indifferent architecture that surrounds it, the excess of furniture, and the road that runs on the north side and permits a clutter of parked cars. Two of these factors can be remedied, especially the last-named, because the road can easily be eliminated to the general advantage.

The square is spacious, sufficiently so to exhilarate, the entrances are sufficiently unobtrusive not to disturb a pleasing sense of enclosure, and the heights of the buildings—three and four stories—are generally adequate for the space, although a distinctive higher building at one corner might have added to the effect. The square is not so enclosed, however, as to deny attractive glimpses of the scene beyond.

The furniture of Crawley's Queen's Square is generally pleasing, especially the fountain at the east end, but there is a little too much. The elimination of the kiosk at the west end would have contributed to

the feeling of spaciousness, and the concrete tubs of flowers are a little overdone. It is very important to be restrained with furniture to give the best impression. The central square of Basildon town centre has some advantages over that at Crawley. It is larger, it is completely pedestrian, there is less furniture, while the tower block of flats at one corner gives it height.

In the market square in the centre of Harlow the sense of enclosure is only partial as the East Gate road which runs across on the south side opens it at two corners. Stopping this road at either side of the square and the continuation of the building on the east and west sides would have secured a more intimate character for the square. It is on a smaller scale than that at Crawley and a feeling of intimacy would have been appropriate while the architecture is a little cold and harsh. A sense of warmth is generally more welcoming.

Although the centre of a town seems to demand for its completeness an open space or square this can have many different expressions. One cannot think of a definite central open space in Edinburgh to which everything converges, as one can at Bristol, yet the whole central area of Edinburgh is a vast enclosure. The long straight road of Princes Street on the north, the Royal Mile on the South with Castle Hill, and the gardens in the valley between, and tall buildings at the east and west make it one of the most impressive urban scenes in the world. The whole composition is a combination of the formal and irregular, the straight street on the north and the very irregular line on the south, while the furniture consists largely of the classic buildings of the Art Galleries and the Gothic Scott monument, and the many trees that are spread on the slopes of the valley. The open spaces in the centre of Welwyn Garden City and Hemel Hempstead have some kinship. They are enclosures which are at the same time gardens. Parkway at Welwyn with its central lawn flanked by roads with a semi-circular termination at the north end, and a central fountain, sculpture and trees as furniture is a space partially enclosed and defined and that contributes in some measure to the pleasure it affords. This feeling will be heightened when some of the buildings at the north end are completed.

In the centre of Hemel Hempstead the shops lie in a long north-south area between the main thoroughfare—The Marlowes—on the east and the gardens in the valley of the river Gade to the west. Again here is a sense of partial enclosure with buildings on one side and trees on the other, broadening out towards the south, where a railway embankment screened by trees defines the space.

It is important to be clear on this question of enclosure and the stimulation of a sense of space as they evoke many differences of opinion. They may, to some, appear contradictory, but the reverse is the case. If a given space is enclosed, as, for example, that enclosed by St. Peter's at Rome, or St. Paul's Cathedral or St. Mark's Square, Venice, or Queen's Square, Crawley, the sense of space is stimulated by the very process of enclosure. If the same space enclosed by St. Paul's had not been so

defined there would have been no sense of it. In cathedrals this space defined by well designed enclosure is a means of religious expression in a wide variety of ways.¹

The pleasure in enclosure or partial enclosure can be experienced on a smaller more intimate scale in many of the neighbourhood centres, and in some of the roads and green spaces in residential areas. The enclosure in the former is generally on three or two sides of a square, but it is all done with a fair measure of variety so that it would be difficult to find two alike. One of the best examples of the three-sided enclosure is the delightful paved centre with flower beds and a kiosk in the Woodside shopping centre of Glenrothes. Others, such as those at The Murray, East Kilbride and the Broadwater centre at Stevenage are broken by the gaps at the corners. Two-sided enclosures generally define two boundaries of a triangular space. A very good example is the centre at Pound Hill, Crawley. Here a one-storey block abuts a three-storey block, giving a pleasant subordination of one to the other, while in the centre of the space are some tall trees which serve to give height to the composition. The existence of these trees was a fortunate circumstance in making a very pleasant ensemble. Other excellent examples of the two-sided enclosure are the centre at Fryerns, Basildon, with tall and low blocks complementing each other, and the Westwood centre at East Kilbride.

A few of the centres are of a very distinctive design in which the partial enclosure is obtained differently, as at South Hatfield situated on a hill a little above most of the surrounding residential areas. Here a concave row of shops on one side has a central public house and community centre opposite, with a church at one end and a block of flats at the other, and the exterior area between is a paved pedestrian space; a felicitous composition.

Effective enclosure where space is pleasantly defined is also often found in residential areas. Rarely do we find the monotony of the straight street bounded by long rows of terrace houses. Instead the curved space between the houses, variously sited, widens and narrows in many different ways, with squares occasionally opening from it, and bordered by triangular and other shaped stretches of green here and there. The occasional widening of the way by such devices pleasantly stimulates awareness of space which is not infrequently subconscious. Walking towards the neighbourhood centre of Southgate, Crawley, up Southgate Drive the space pleasantly broadens by means of a triangular green on the left, which is bounded on one side by a long row of terrace houses. This broadening of space is exhilarating and the well designed

¹Much of the pleasure from many of the finest squares of London is derived from the pleasant sense of enclosure, as in Bedford, St. James' and Cavendish Squares, yet some, like Hanover Square and the squares of Rome like the Piazza Popolo, give glimpses beyond that add to ones pleasure. But these glimpses or extensions must be satisfactorily related to the enclosure. They can be so open at various points as to destroy essential character. Trafalgar Square, for example, is very much open at various points, especially to the south and this destroys the feeling of the enclosed space, so that it is neither one thing nor the other and is thus rather characterless.

row of houses performs an aesthetic function in pleasantly defining the space. The effect is assisted by the rising ground which gives height to the row of houses. Near the Woodside centre at Glenrothes, a triangular patch on the side of the road is bounded on one side by a three-storey block of flats abutted by a row of two-storey houses with projecting entrances, while on the road side is a row of trees. The space is occupied by lawns, flower-beds and paths, and a very delightful partial enclosure it is. Sometimes a road changes to a footpath with lawns on either side, but the scheme of pleasant enclosure continues, as at South Hatfield where irregularly shaped sloping lawns, broken with flower beds and shrubs, are enclosed by two-storey houses with flat roofs. Another attractive example is at Mark Hall Moors where extensive paving with flower beds is varied with lawns.

In Rome the streets of the central areas frequently open to squares, fancifully likened by Steen Eiler Rasmussen to corridors through Rome's great buildings and reception halls of the most varying shapes.¹ In Newton Aycliffe the curving roads open to village greens, some of which, considering the scale of the town, are surprisingly large. The idea is good but if some of these greens had been a little smaller they would have had a more intimate character, while they would have been better related to the two-storey houses. One of the smaller and one of the best is the green in the centre of a precinct in Ward B, bounded by the curved Lowery Road on the east and Cumby Road to the south. The ground slopes to the east, the green narrows to the north where there is a group of trees and shrubs, along the west is a row of houses fronted by a pedestrian way, and on the south side there is the unusual and attractive row of patio houses noted in Chapter XVIII.

If one sometimes sees churches and schools three-dimensionally in Victorian industrial towns most other buildings are seen only two-dimensionally, and one is conscious of walls on either side of a street. This is particularly the case with central areas of shops and offices, and in the residential areas of the lower income groups with long rows of terrace houses and closely built semi-detached houses. This is also the case with the bigger houses built in terraces, but there is often less sense of monotony here, because the units are sometimes well designed, with some architectural distinction, and the effect is often enhanced by some degree of repetition. But with meaner houses of poor design the repetition merely aggravates the meanness and accentuates the monotony of a long wall. If, on the other hand, the small unit is well designed a degree of repetition is agreeable, but there is generally a satisfying limit beyond which it may often be inartistic to go, like the repetition of a figure in music. There is long repetition in the Crescent at Bath, but it is a large, distinctive and well proportioned unit, and the risk of monotony in the repetition is greatly reduced by the beautiful curve of the crescent, and the same can be said of the Circus. The other extreme is the long rows of mean houses in the industrial cities and in many of the suburbs

¹Towns and Buildings (London 1951), p. 53.

of London. If such rows could have been broken sometimes by a well designed building that could be seen three dimensionally it would have been an oasis in the monotony of arid terraces.

In the new towns the too long terrace of dull domestic units is fortunately the exception rather than the rule, but they do exist. They can be seen at Harlow, at Basildon and at Hatfield, and they would probably be defended by their architects on the grounds that the units repeated are well designed and for that reason a long repetition can be pleasing. The curved terrace rows at South Hatfield where the eaves of the flattish roof emphasise the curve could be most plausibly defended, but here it is the curve that is the aesthetic justification.

One architect, Frederick Gibberd, in the discussion on his paper on 'The Architecture of the New Towns' at the Royal Society of Arts in January 1958, expressed the view that there is no limit to the length of a terrace. He thought it was a question of proportion, but he complains that they are not high enough, and he suggests that the long terraces would be more effective if they were taller.¹ This is really complaining of your subject and asking that instead of two-storey units they should be three or four, altered, in other words, to suit the architect's shortcomings. It is also an aesthetic fallacy to imply, as does Mr. Gibberd, that there is no limit to the length of a terrace and therefore of the repetition of the unit. In art, especially architecture and music, repetition is one of the principles of design whereby unity is secured, but there is an artistic limit. Even the best terrace houses at Bath repeated the whole length of Oxford Street might begin to be monotonous. The beauty of graceful Gothic arches in the nave of a cathedral is much enhanced by a degree of repetition, but the length of a long nave, say Winchester, indicates the point of artistic completeness. When the unit is very simple, without much architectural interest in itself, as in some new town housing, then there is a definite artistic period of repetition if it is to look effective. Too often the repetition has gone beyond the effective length.

The point can be demonstrated by reference to music which is closely akin, aesthetically, to architecture. In listening to music one is often delighted by the repetition of a phrase, but again there is a limit, otherwise monotony would result. In the allegro movement of Mozart's *Fantasia* a simple phrase is repeated sixteen times, and it is arrested, one feels, just at the right moment, but to have repeated it forty times would have been monotonous. In the concluding bars of Chopin's *Nocturne*, Opus 55, No. 1, three are identical and the phrase is repeated seven times, without variation, and one feels that much more than seven would have been too much. It is preceded by slight variations, but even with these there is an artistic period.

Similarly, to know when to stop with a terrace block is a matter of artistic judgement, which is fortunately well observed in most of the residential areas of the new towns. This is much assisted in the general

¹Journal of the Royal Society of Arts (April 1958) p. 352.

abandonment of the pattern of straight streets; instead the layouts are rather groups of spaces linked by curving roads and pedestrian ways which also run through them.

Three-dimensional views of buildings combined with continuous façades of houses is achieved mainly by arranging the latter at different angles to the road, so that good views of end houses are obtained; and also by arranging the fronts of houses at different angles, echelon fashion and so on. An excellent example are some well designed houses in Sparrows' Herne, Kingswood, Basildon, where the houses are placed diagonally to the street, and in the triangular spaces thus formed are lawns and flower beds. It is a very pleasant effect. Another grouping is a row of detached houses, at Leaves Spring, in the Shephall neighbourhood at Stevenage, where the houses are tilted slightly away from the footway in front, so as to abut the wall of the next house at about a third of its depth. The houses have tilted roofs, they are faced on the front with weather boarding divided by three broad vertical strips, and the sides of the houses are of brick. The effect is unusual and a little dramatic. At Hemel Hempstead are some beautifully proportioned blocks of two houses, with entrances on different sides which are sited to be enjoyed three-dimensionally, with lawns stretching in front.

Gardens and verdancy play a conspicuous part in most of the beautiful cities of the world. Apart from bringing the freshness of the country to the dryness of the building scene they provide a decorative element which often enhances an architectural ensemble. In many of the Scandinavian and Italian cities gardens are conspicuous not only in squares and parks but in little irregular spaces, and these sometimes form settings for sculpture. It is one of the pleasant experiences in visiting Scandinavian towns, to come suddenly on an open garden with its decorative sculpture such as a bronze boy playing with a hedgehog among a small group of trees in a suburb of Copenhagen. And these delights are being perpetuated in the new towns. The unit is the family house with a garden, but irregular enclosures, the broadening and narrowing spaces enclosed by houses, through which the residential roads run, permit of triangular and other spaces occupied by lawns, flower beds and a sprinkling of trees. One can point to many delightful effects where public gardens intermixed with the urban scene contribute much to aesthetic delight, such as the lawns, with the trees and shrubs, sloping down from the houses to Easington Way in Peterlee, the triangular green with trees in the neighbourhood centre at Pound Hill, Crawley, and the lawns that border the nearby roads of the neighbourhood; the squares at Hemel Hempstead and Harlow, sometimes with their decorative sculpture like the bronze donkey in Pitman's Field at Harlow and the tree groupings in the town centres, like those at Crawley. Many of these garden and verdant effects are, however, potential, for most of the trees are small, but in twenty years' time when they have grown something of the rich verdancy of Letchworth and of

the older parts of Welwyn Garden City will have been achieved. Time has still to give the finishing touches.

Furnishings in most towns of Great Britain give the impression of a haphazard grouping of aesthetically unrelated objects for which various authorities are responsible, but in the new towns more harmony and restraint seems to have been achieved. Perhaps the most conspicuous of furnishings in a modern town are the lighting standards and the types employed in most of the new towns are of simple restrained design. One that is much favoured for town centres and residential areas is the simple vertical standard surmounted by the lamp with variations and this is a form that can be seen in profusion at Harlow, Crawley, Bracknell and Newton Aycliffe. Standards with horizontal lamps and with curved terminations are all of restrained character and it has obviously been the intention to make these and other items of urban furniture as unobtrusive as possible.

Only in some of the towns have decorative furnishings like sculpture and fountains appeared to any extent. They are most apparent in Harlow, while Stevenage and Welwyn Garden City each have a few works. Good sculpture can be thought of as the jewels of town planning schemes, and Harlow is the town which so far is most brilliantly studded with them. This has been achieved by its Arts Trust which was established to provide open-air sculpture in the town for public enjoyment. The trust has representatives from the development corporation, and the Urban District Council, with Sir Philip Hendy, the Director of the National Gallery at its head, and it has already provided the town with an interesting collection of modern sculpture of some fifteen works in its gardens and squares. Perhaps the most notable is the Family Group in Hadene stone by Henry Moore which was placed in Mark Hall Park in 1956. Willi Soukop's little bronze donkey in one of the squares has already been mentioned; and another notable work is the Sheep Shearer by Ralph Brown which is placed near Ladyspot Tenants' Common Room.

Stevenage also has a work by Henry Moore, a Family Group which is in front of the Barclay Secondary School, but the best known and much photographed sculpture in Stevenage is the bronze group called 'Joy Ride' by Franta Belsky which stands on the elevated footway in the Town Centre.

The sculpture that graces the gardens at Parkway in the centre of Welwyn Garden City was placed there in the days of the old town. The most imposing decorative feature of the centre, however, is the magnificent fountain situated in Parkway at the point where it is joined by Howards Way. The high jets of this fountain seen against the trees and sky help to make it a fine decorative focal point. Stevenage has a fountain in its centre, but it is rather lost in the large pool, and Crawley also has one, a delightful work in bronze, at the eastern end of Queen's Square. This is the most pleasing piece of ornamental furniture in Crawley which has little sculpture, the only other work being a bronze

panel on the Co-operative building on the south side of Queen's Square. This sparsity of sculpture is a regrettable circumstance in so fine a town. The bandstand, a doubtful acquisition, was transferred from Gatwick racecourse and looks rather like a piece of Victorian furniture in a modern living room, which, being *à la mode*, is perhaps why Crawley did it.

There are occasional works of sculpture in some of the other new towns, like the wrestlers in the little centre of Roe Green at Hatfield, but there is room for a great deal more.

A city or town has to grow to maturity before it can be enjoyed as a unity, as a space-time conception. Time harmonises and fuses the buildings together, the trees can only perform their full decorative and refreshing function after twenty or thirty years, and thus no man can properly judge a new town aesthetically until it is at least thirty years old. It must grow to some sort of maturity like Bath, but if it is to have long vitality it must be constantly renewing itself after many maturities. And the inhabitants of the town must grow with it, for it is less those who have migrated to the new towns that will make them, than their children.

TABLE I

SOME NEW TOWN STATISTICS

							Total to December 1962
New population	..	..	..	..	..	..	387,418
New shops	..	..	..	..	..	..	2,142
New schools	..	..	..	..	..	..	229
New factories	..	..	..	..	..	..	558
New offices (occupiers)	..	..	..	..	..	..	343+
Capital expenditure	..	..	..	..	..	..	£326 m.
Capital expenditure (housing only)	..	..	..	..	..	..	£202.5 m.
New dwellings:							
Development Corporations	..	..	..	..	..	103,922	
Local authorities	..	..	..	..	..	11,365	
Others	..	..	..	..	..	6,807	
							122,094

TABLE II

HOUSING IN THE NEW TOWNS TO
DECEMBER 1962¹

	Total completed at 31 December 1962 (est.)			Under construction 31 December 1962 (est.)			To be completed 1963 (est.)		
	Dev. Corp.	L.A.	Others	Dev. Corp.	L.A.	Others	Dev. Corp.	L.A.	Others
LONDON RING									
Basildon	11,128	1,125	1,012	1,363	177	22	1,054	120	50
Bracknell	4,920	352	39	598	none	43	499	none	28
Crawley	10,968	896	1,732	422	none	85	438	103	85
Harlow	14,835	721	588	700	none	40	790	none	110
Hatfield	3,307	1,025	152	280	none	18	242	10	14
Hemel Hempstead	10,456	1,444	1,314	607	none	220	603	120	200
Stevenage	11,200	629	548	840	2	100	900	2	120
Welwyn G. C.	4,935	1,341	298	350	24	29	443	24	24
<i>Total: London Ring</i>	71,749	7,533	5,683	5,160	203	557	4,969	379	631
OTHERS									
Corby	4,770	1,927	399	489	109	110	350	100	100
Cwmbran	4,728	1,455	567	87	168	60	325	211	60
Newton Aycliffe	4,131	4	34	340	none	5	300	none	10
Peterlee	4,137	52	17	314	10	3	390	10	3
<i>Total: E. and W.</i>	89,515	10,971	6,700	6,390	490	735	6,334	700	804
SCOTLAND									
East Kilbride	9,223	23	89	1,400	12	17	900	12	17
Glenrothes	3,507	315	17	564	1	none	395	1	1
Cumbernauld	1,677	56	1	2,154	none	2	900	none	2
<i>Total: G.B.</i>	103,922	11,365	6,807	10,508	503	754	8,529	713	824

Source: Development Corporations, Commission for New Towns, and Local Authorities

¹Including housing by Commission for New Towns (Crawley and Hemel Hempstead)

TABLE
PROGRESS OF NEW

<i>Name</i>	<i>Corporation Appointed</i>	<i>Designated Area (acres)</i>	<i>Population</i>		
			<i>Original</i>	<i>Proposed¹</i>	<i>At 31 Dec. 1962 (est.)</i>
LONDON RING					
Basildon	Feb. 1949	7,818	25,000	{ 86,000 106,000	58,000
Bracknell	Oct. 1949	3,296	5,142	{ undecided 50-60,000	22,390
Crawley	Feb. 1947	6,047	9,000	{ 62,000 70,000	56,300
Harlow	May 1947	6,395	4,500	{ undecided 80,000	60,640
Hatfield	June 1948	2,340	8,500	{ 26,000 29,000	21,600
Hemel Hempstead	Mar. 1947	5,910	21,200	{ 65,000 80,000	58,700
Stevenage	Dec. 1946	6,156	7,000	{ 60,000 80,000	49,500
Welwyn G. C.	June 1948	4,317	18,500	{ 42,000 50,000	37,000
<i>Total: London Ring</i>		42,279	98,842	{ — 555,000	364,130
OTHERS					
Corby	May 1950	2,696	15,700	{ 55,000 75,000	39,500
Cwmbran	Nov. 1949	3,160	12,000	{ 45,000 55,000	32,000
Newton Aycliffe	July 1947	865	60	{ 15,000 20,000	13,700
Peterlee	Nov. 1948	2,350	200	{ 25,000 30,000	14,400
<i>Total: E. and W.</i>		51,350	126,802	{ — 735,000	463,730
SCOTLAND					
East Kilbride	Aug. 1947	10,250	2,400	{ undecided 70,000	34,500 ¹⁰
Glenrothes	Oct. 1948	5,730	1,100	{ 32,000 50-55,000	14,140
Cumbernauld	Feb. 1956	4,150	3,000	{ undecided 70,000	8,350
<i>Total: G.B.</i>		71,480	133,302	{ — 930,000	520,720

*Three additional new towns have been designated on which constructional work had not commenced by the Summer of 1963:—Skelmersdale in Lancashire designated in October 1961 (proposed population 80,000). Livingston in West Lothian (proposed population 70,000) and Pawley in Shropshire designated in January 1963 (proposed population 90,000).

¹Two figures are given. The top line is the population size when it is proposed to stop 'importing' people and jobs. The lower line is the ultimate population to be reached by natural increase for which the town is planned.

³ Not now in use as a school.

⁵ Excluding College of Further Education.

⁷ Includes three banks.

⁹ Includes College of Further Education (Phase 1).

TOWNS TO DECEMBER 1962*

Shops			Schools					Estimated Capital Expenditure by DGs and NTC	
No. of original traders approx. (In brackets: sq. ft of floor area)	New Shops completed 31 Dec. 1962 (est.)		No. before designation	New Schools completed 31 Dec. 1962 (est.)	Under con- struction 31 Dec. 1962 (est.)			Housing since designation to 31 Dec. 1962 £	Total (inc. housing) to 31 Dec. 1962 £
			(In brackets: number of school places)						
274 ²	292	(552,021)	7	(2,600)	18	(10,513)	none	26,500,000	41,960,000
85	75	(149,566)	4	(1,260)	11	(3,490)	3 ⁹ (890)	9,207,800	17,567,300
145	275	(357,930)	8	(840)	23	(17,160) ⁴	1 (1,350)	20,000,000	33,750,000
90	246	(399,277)	5	(815)	21	(13,480)	3 ⁺² (2,480) extns.	26,050,000	44,640,000
104	96	(114,728)	4	(1,500)	12 ⁺⁴	(4,850) extns.	2 (640)	6,300,000	9,400,000
369 ⁶	294	(408,888)	11	(3,520)	29	(10,690)	5 (2,560)	22,700,000	36,100,000
140	223	(343,700)	4 ⁸	(780)	30	(12,260) ⁵	5 (2,000) +extns.	21,250,000	38,000,000
51	109	(197,489)	5	(2,040)	14	(5,580)	2 (560)	9,000,000	17,550,000
1,258	1,610	(2,523,599)	48	(13,355)	158	(78,023)	21 (10,480)	141,007,800	238,967,300
111	168	(252,689)	7	(2,940)	14	(4,920)	none	10,500,000	13,000,000
155	78	(82,953) ⁷	6	(2,269)	13	(5,140)	none	8,110,800	12,746,500
none	70	(85,105)	none		8	(2,900)	1 (240)	7,049,000	9,169,000
1	58	(49,673)	none		14	(6,130)	2 (1,136)	6,971,700	10,075,100
1,525	1,984	(2,994,019)	61	(18,564)	207	(97,113)	24 (11,856)	173,639,300	283,957,900
40	103	(104,500)	1	(400)	10	(7,520)	3 (2,160)	17,901,100	25,063,200
3	41	(39,004)	1	(200) ³	9	(5,615)	none	5,976,000	8,782,000
31	14	(11,430)	3	(515)	3	(1,580)	1 (640)	4,913,000	8,156,000
1,599	2,142	(3,148,953)	66	(19,679)	229	(111,828)	28 (14,656)	202,429,400	325,959,100

Source: Development Corporations and Commission for New Towns

²Pre-designation shops are being increasingly acquired for demolition and present total is uncertain.⁴Including Technical College.⁵127 old shops now demolished.⁶One of these has since closed.¹⁰Plus about 1,500 in outlying parts of designated area.

TABLE

NEW TOWNS: BALANCE SHEET

	1 <i>Government Advances (Less Repay- ments)¹</i>	2 <i>Sundry Creditors</i>	3 <i>Repairs Fund, etc.</i>	4 <i>Surplus on Disposals</i>	5 <i>Surplus on General Revenue</i>	6 <i>Balance Sheet Totals</i>	7 <i>Freehold Land and Site Works</i>
	£000	£000	£000	£000	£000	£000	£000
Basildon	35,911	704	172	2	—	36,789	5,617
Bracknell	15,786	256	175	60	—	16,277	2,384
Crawley	32,730	376	368	—	35	33,509	5,823
Harlow	41,187	1,020	396	16	747	43,366	4,237
Hatfield	8,183	291	83	11	—	8,568	1,322
Hemel Hempstead	32,758	1,035	2	56	53	33,904	5,674
Stevenage	34,322	1,077	195	—	648	36,242	4,409
Welwyn G. C.	14,637	486	94	256	53	15,526	3,529
<i>Total London Ring</i>	215,514	5,245	1,485	401	1,536	224,181	32,995
Corby	10,589	206	82	—	—	10,877	1,605
Cwmbran	11,016	397	152	41	—	11,606	2,337
Newton Aycliffe	8,389	93	97	—	1	8,580	1,191
Peterlee	9,942	201	Dr. 6	—	—	10,137	1,490
<i>Total E. & W.</i>	255,450	6,142	1,810	442	1,537	265,381	39,618
East Kilbride	25,244	579	147	—	—	25,970	4,986
Glenrothes	8,303	378	25	2	—	8,708	1,363
Cumbernauld	5,275	399	12	67	—	5,753	1,393
<i>Total G.B.</i>	294,272	7,498	1,994	511	1,537	305,812	47,360

¹Total advances received £300,856,000. Repaid £6,584,000. Repaid 1961-2 £1,103,000.

IV

FIGURES AT 31 MARCH 1962

8 <i>Buildings Purchased</i>	9 <i>Buildings Con- structed</i>	10 <i>Furniture and Plant</i>	11 <i>General Develop- ment</i>	12 <i>Ancillary Develop- ment</i>	13 <i>Deprecia- tion</i>	14 <i>Deficien- cies on Disposals</i>	15 <i>Loans to LAs, etc.</i>	16 <i>Stocks, Debtors, etc.</i>	17 <i>Accumu- lated Deficien- cies²</i>
£000	£000	£000	£000	£000	£000	£000	£000	£000	£000
1,322	23,917	91	2,935	1,823	858	—	80	183	1,679
392	11,080	42	808	1,068	356	—	246	137	476
1,166	22,933	30	1,160	—	790	248	1,739	359	841
429	31,719	87	2,616	3,000	1,489	—	1,882	401	484
215	5,976	20	706	—	203	—	132	310	90
794	25,322	72	1,877	—	1,093	—	821	437	—
264	27,593	65	745	2,362	922	80	104	490	1,052
1,768	9,569	85	301	—	456	—	6	724	—
6,350	158,109	492	11,148	8,253	6,167	328	5,010	3,041	4,622
175	8,995	16	112	—	193	38	34	67	28
25	7,842	35	1,035	175	201	—	153	57	148
3	6,934	138	355	170	375	27	44	52	41
23	7,085	52	606	339	320	124	273	85	380
6,576	188,965	733	13,256	8,937	7,256	517	5,514	3,302	5,219
202	16,852	82	1,105	31	500	110	—	465	2,637
27	6,360	30	157	—	156	—	36	207	684
167	3,605	55	324	—	31	—	—	37	303
6,972	215,682	900	14,842	8,968	7,943	627	5,550	4,011	8,843

Source: Reports of Development Corporations (HMSO)

² Accumulated deficiencies of £5,219,000 for ten towns in E. & W. include £3,938,000 on ancillary undertakings. The total is offset by the general revenue surpluses of £1,537,000 for six towns.

TABLE V

MANUFACTURING INDUSTRY IN NEW TOWNS TO DECEMBER 1962

	Before Designation			New Factories Completed by 31 December 1962 (est.)			Under Construction 31 December 1962 (est.)	
	No. of occupiers	No. of employees	Size (sq. ft.)	No. of occupiers	No. of employees	Size (sq. ft.)	No. of units	Size (sq. ft.)
LONDON RING								
Basildon	20	not known	not known	78	11,983	2,340,025	7	1,314,400
Bracknell	7	179	48,250	28 + extns.	6,646	1,344,476	1 + 1 extn.	52,600
Crawley	17	1,300 ¹	160,000	79	14,386	2,880,242	6 extns.	92,720
Harlow	6	333	not known	87	12,882	3,121,150	6	285,040
Hatfield	8 ²	1,500	100,000	16	776	178,340	none	none
Hemel Hempstead	36	6,200	not known	58	8,376	1,838,877	1 + 5 extns.	442,285
Stevenage	5	2,600	371,000	47 + extns.	15,300	2,831,271	3 + 3 extns.	345,720
Welwyn G. C.	69	8,000	1,994,600	62	5,330	1,749,966	4	116,695
Total: London Ring	168	20,000 +	2,673,850 +	455 + extns.	75,679	16,304,347	22 + extns.	2,649,460
OTHERS								
Corby	none ³	none ³	none ³	18 + 1 extn.	2,160 ⁴	344,551	1	5,750
Cwmbran	30	17,000 ⁵	4,380,830	3 + extns.	95	19,420	none	none
Newton Aycliffe	none	none	none	none	none	none	none	none
Peterlee	none	none	none	4	1,218	226,670	2 + 1 extn.	17,720
Total: E. and W.	198	37,000 +	7,054,680 +	480 + extns.	79,152	16,894,983	25 + extns.	2,672,930
SCOTLAND								
East Kilbride	3	380	155,000	57	7,937	1,975,900	23 ⁷	392,500
Glenrothes	4	1,683	750,000 ⁶	9	2,111	248,888	1	22,488
Cumbernauld	3	71	151,000	12	2,550	721,580	3	60,300
Total: G.B.	208	39,134 +	8,110,680 +	558 + extns.	91,750	19,841,356	52 + extns.	3,154,218

Source: Development Corporations and Commission for New Towns.

¹Potential 3,000.²Now 18,550. This figure covers industry in and around Cwmbran.³Ground-floor coverage only.⁴Including eighteen advance factories.⁵Now doubled to 2,700.⁶Excluding the Havilland Group and other factories just outside the designated area.⁷Stewarts and Lloyds steelworks now employs 12,400 persons (8,000 at designation) not all of whom live in Corby. The steelworks adjoins the designated area.

TABLE VI
OFFICES IN NEW TOWNS

	<i>New Commercial Offices Completed by 31 December 1962 (est.)</i>			<i>Under Construction 31 December 1962 (est.)</i>	
	<i>No. of occupiers</i>	<i>No. of employees</i>	<i>Size (sq. ft)</i>	<i>No. of units</i>	<i>Size (sq. ft)</i>
Basildon	14	330	38,390	1	38,754
Bracknell	80	1,576	254,327	none	none
Crawley	52	1,700	197,900	none	none
Harlow	13	980	160,572	3	58,265
Hatfield	not yet let	not yet let	3,000	not known	15,000
Hemel Hempstead	28	960	184,436	4	180,000
Stevenage	39	1,100	139,300	none	none
Welwyn G. C.	39	440	121,804	none	none
<i>Total: London Ring</i>	265+	7,086+	1,099,729	8+	292,019
Corby	20	370	40,080	1	1,700
Cwmbran	3	300	26,231	none	none
Newton Aycliffe	8	76	12,488	none	none
Peterlee	2	not known	8,375	5	15,035
<i>Total: E. and W.</i>	298+	7,832+	1,186,903	14	308,754
East Kilbride	28	60	21,000	10	40,000
Glenrothes	12	35	9,249	10	18,724
Cumbernauld	5	12	2,785	2	2,000
<i>Total: G.B.</i>	343+	7,939+	1,219,937	36+	369,478



SUMMARIES OF REPORTS OF THE NEW TOWNS COMMITTEE, 1946

(Bracketed numbers are those of the paragraphs in each report.)

FIRST INTERIM REPORT, JANUARY 1946

(1) *Acquisition of site*

(i) The decision as to the situation and boundaries of a new town must rest finally with the Government [3, (1)].

(ii) The Government should have powers of compulsory purchase of the site on behalf of the town development agency [3, (2)].

(iii) The site acquired should include the whole of the proposed built-up area and a surrounding belt of appropriate depth [3, (3)].

(2) *Choice of agency for development*

(i) Each scheme for a new town should be treated separately and one agency should be responsible for each [9 (1)].

(ii) This single agency should be generally responsible for planning and development [9 (2)].

(iii) The agency chosen should have no other responsibilities [9 (3)].

(iv) A government sponsored public corporation, financed by the Exchequer, is the most suitable agency [9 (4)].

(v) Subject to any direction on matters of major policy, the public corporation should have freedom of action comparable with that of an ordinary commercial undertaking [9 (5)].

(vi) A similar public corporation sponsored and financed by interested local authorities is appropriate in some cases [9 (6), (7) and (8)].

(vii) Ordinary commercial enterprise is not an appropriate agency [9 (9)].

(viii) A housing association is inappropriate as agency [9 (10)].

(ix) An authorised association is an appropriate agency in certain cases [9 (11)].

(3) *Public corporations*

(i) Government sponsored: Constitution, powers and relationships [10 (1)].

(ii) Local authority sponsored: Interested local authorities should provide finance and nominate some members of the governing body [10 (2)].

(4) *Central Advisory Commission*

A Central Advisory Commission should be established by the Minister of Town and Country Planning and the Secretary of State for Scotland to advise them and the individual agencies, and with responsibilities indicated [11].

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(5) *Ownership of site*

(i) Where the agency is a public corporation, it should hold the freehold or feu [12 (1)].

(ii) Where the agency is an authorised association, the freehold or feu should be held by some body of national trustees, and a lease granted to the association [12 (2)].

(6) *Finance*

(i) Funds for a government sponsored corporation should be advanced by the Public Works Loan Board or the Exchequer and if necessary payment of interest deferred in the early years [13 (1) and (2)].

(ii) The Public Works Loan Board should be empowered to advance money to a local authority sponsored corporation [10 (2) (ii)]—or to the local authority or authorities sponsoring that corporation [13 (3)].

(iii) The terms upon which any advances are made by the Public Works Loan Board to an authorised association should vary according to the structure and control of the association [13 (4)].

(iv) The agency should be put on the same footing as local authorities for receiving subsidies and grants in appropriate cases [13 (5) and (6)].

(7) *Industry*

Location of industry must keep in step with building of new towns [14].

(8) *Legislation*

The need for fresh legislation is urgent [15]; proposals are made in Appendix 3.

(9) *Stevenage*

Arrangements should be made for setting up immediately a public corporation for the development of a new town at Stevenage to proceed with the necessary work in advance of legislation [16].

SECOND INTERIM REPORT: APRIL 1946

(1) *Acquisition of land*

(i) Compulsory powers of purchase should be available [5].

(ii) The population limit decided upon at the outset should be adhered to; the site should be sufficient for that number and for a peripheral belt [6].

(iii) In the major extension of a small town powers of compulsory purchase should extend to the existing nucleus [7].

(iv) There should be expedited procedure for the compulsory purchase of undeveloped land [8].

(v) The agency should normally purchase the whole of the site at the outset; otherwise there should be a declaratory order followed by compulsory purchase orders. The extent of land to be acquired should be defined as early as possible [9, 10].

(vi) The location having been selected, the agency should determine the actual boundaries, but preliminary steps for purchase should be taken immediately [11].

(vii) There should be powers of early entry for survey [12].

(2) *Ownership of site*

The recommendations in First Interim Report are restated [13].

(3) *Building development*

The agency's powers to undertake development should be as wide as those of any ordinary landowner [14].

(4) *Land policy for corporation*

(i) Where the corporation holds the freehold, it should not, save in exceptional circumstances, dispose of it; it should grant leases [15].

(ii) Leases should normally be for not longer than ninety-nine years [16].

(iii) The agency should retain and let at rack rents, shop premises and some factories [17].

(iv) There should be no ministerial control over disposal of land by the corporation beyond the power to give general directions [18].

(v) Modifications are suggested if the freehold is held by a national body [19].

(vi) Application to Scotland [20].

(5) *Process of settlement*

(i) Variety of employment should normally be provided in each town [21 and 22].

(ii) New towns should provide not only for dispersal but for other movements of industry and population [23, 24].

(iii) A balance of income groups and of varied interests is desirable and one-class neighbourhoods should be avoided [25].

(iv) Movement of population must be co-ordinated with that of industry, and where necessary temporary transport provided [26].

(v) Local authority sponsored corporations should not provide exclusively for population from the areas of the sponsoring authorities [27].

(vi) Advice and services should be given to industrialists considering location in the towns [28].

(vii) The agency should provide sectional factories for letting [29].

(viii) The agency should be in touch with national industrial developments [30].

(6) *Provision of basic public services*

The agency should be empowered, where necessary, to supply public services [31, 32, 33, 34].

(7) *Speed of construction*

Reference is made to the relationship between housing and building in the new towns and the national housing and building programme, and the speed at which individual towns can be built is discussed [35, 36, 37, 38, 39, 40].

(8) *Finance*

(i) The investment of the new towns will be large; in the main it is not an addition to the aggregate national expenditure on rebuilding but is an alternative allocation thereof [41, 42].

(ii) Adequate finance is necessary for all the various classes of expenditure involved [43, 44, 45, 46, 47].

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(iii) The government sponsored corporation should be financed by the State, and there should be relief from payment of interest during the early years of development [48, 49, 50, 51, 52].

(iv) After payment of interest and amortisation charges, any surplus should be applied for the public benefit [53].

(v) The corporation should have powers to borrow, make advances, and establish subsidiaries [54, 55].

(vi) The corporation should not be at a financial disadvantage compared with other housing agencies as to subsidies [56, 57, 58, 59, 60].

(vii) Where houses are built by the corporation expressly for a dispersing authority the Exchequer subsidy should be paid to the corporation, and an agreement made with the authority as to rate contribution [61].

(viii) Where houses are built by the agency for other persons the Exchequer should pay to the agency the Exchequer subsidy and equivalent of the usual rate contribution [62, 63].

(ix) The corporation should not be treated less favourably than existing towns in the matter of grants for amenities [64].

(x) Financial arrangements should be made by the corporation and the local authority in respect of services provided by the corporation instead of the local authority [65, 66, 67, 68, 69].

(xi) Progress reports and accounts should be presented [70, 71, 74, 76].

(xii) Audit should be by professional accountants, not by government auditors [72, 74, 76].

(xiii) Local authorities should have power to finance corporations sponsored by themselves [73].

(xiv) Authorised associations should be financed as recommended in the First Interim Report; such associations should be entitled to subsidies [75].

(9) *Local government status of new community*

(i) Where the site is in the area of more than one local authority the boundaries should be adjusted [77].

(ii) The area should be created a separate civil parish, and urban district powers be granted in due course. There should be corresponding treatment in Scotland [78].

(iii) The agency should not exercise the functions of a local authority, but should not be precluded from providing works and services where necessary [79].

(iv) The agency, if a corporation, should be given the powers of an Interim Development Authority [80].

(v) There should be powers to suspend local byelaws [81].

(10) *Position of agency when town is developed*

A large majority of the Committee favours the retention in being of the agency as landowner, rather than the transfer of ownership to the local authority, but this matter will not need decision for many years [82, 83, 84, 85, 86].

FINAL REPORT: JULY 1946: SUMMARY (PP. 64-68)

A. Introduction

Relation to previous Reports (1); scope of this Report (2); no standard

pattern is prescribed (4); effect of general economic situation on amenities to be provided in new town (5); acknowledgments and references (6-9).

B. Principles in Planning

I. *Type of Town: Entirely new or extension*

The alternatives (10); their advantages and disadvantages (11-13); balance of advantage is with entirely new towns, but both are advisable (14); holiday towns raise special problems (15).

II. *Size*

Optimum population suggested for town area is 30,000 to 50,000, but with related district may be 60,000 to 80,000 (16-20); in certain cases a smaller population may be sufficient (21).

III. *Social structure*

A balanced social composition should be aimed at (22); methods are suggested (23-24); segregation should be avoided (25).

IV. *Selection of site*

Choice of sites is a matter of national policy, and much data is already available (26); reminders are given of the physical features to be taken into account (27); distance from main centres should be sufficient for detachment but may be limited by economic connections (28); areas needed for sites are indicated (29).

V. *Importance of flexibility*

Master plan, while definite, should be under constant revision (30).

VI. *Main zoning*

Estimates of areas required for industry, main centre, and general urban purposes, should be made, and position of these zones decided (31-33); suggestions are made as to the necessary areas (34-38); the overall urban density will probably not much exceed twelve persons per acre (39).

VII. *Layout, design and constructional standards*

Layout must consider functions, demand and aesthetics, and is largely team work (40); variety has to be reconciled with general harmony, and diversity of individual requirements gives scope for interesting design (41-42); grouping into neighbourhoods should arise naturally from topographical features, but neighbourhoods should not be closed communities (43); each neighbourhood should have a centre with shops and public buildings (44); leases should provide for approval of buildings by the agency, on which its chief architect should advise (45-46); suggestions are made as to the employment of architects (47-49); control should be by building regulations adapted to modern conditions (50-52); standards of construction and equipment should follow the recent officially prepared codes (53-55); air-raid precautions (if any) should be based on government policy (56); noise and atmospheric pollution should be controlled (57-58).

VIII. *Landscape treatment*

Suggestions are made as to landscape design, town planting, wind-break planting, and the treatment of existing villages within the town site (59-64).

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IX. *Use of surrounding land*

The peripheral belt should be used in the main for agriculture, farm boundaries being rearranged as land is absorbed for building (65); machinery should be set up to relate production in green belt to local consumption and to promote co-operative services (66); small holdings should be encouraged (67).

C. **Factors affecting preparation of plan**

I. *General*

In the general and contour survey aerial photography should be employed, and the use of contour models is suggested (68); the outline plan should be followed by detailed plans for services, communications, and building (69-70); adequate staff and offices should be provided (71).

II. *Services*

Water supply resources must be adequate for the final size of the town, taking into account the rising consumption per head (73-75); sewage disposal works require early consideration, and co-operation with adjacent authorities should be explored (76-77); special attention should be given to industrial effluents (78); separate sewers for foul and surface water are suggested (79); electricity will normally be drawn from an existing undertaker, but the agency should consider undertaking distribution (80-81); gas may be supplied by an existing undertaker, a site for gasholder or new works should be reserved, and the agency should consider undertaking distribution (82-85); district heating offers great advantages and a trial is recommended in a new town (86-88 and Appendix 4); modern methods of refuse collection and disposal should be adopted (89-92), and organised with street cleansing (93); standards of street lighting should be based on official recommendations (94); underground services should be located as recommended by the Joint Committee of Engineering Institutions (95-96); further recommendations are made as to siting of services, sewers and district heating mains (97-98); subways for services are not advised (99).

III. *Communications*

On road planning the agency should be guided by Ministry of Transport Reports (100); the road system must link conveniently with the network, and will probably be of the radial and ring type (101); main radial and ring roads should be free-flow traffic channels, the precincts bounded by them not having through traffic (102-103); further detailed suggestions are made as to road layout and standards (104-112); an internal bus service is essential, and the bus stations should include a central one with ancillary services (113); ample provision of car parks is necessary, and these should be well distributed and accommodate cycles also (114); suggestions are made as to commercial and private garages (115); special attention should be given to the design of the railway station (116); facilities within reasonable distance for private, club and charter flying, and for gliding, will be desirable (117); if there is water transport, certain industries should be sited adjacent to it (118).

IV. *Industry, trading estate facilities and commerce*

Facilities for factory industry, and for clerical and administrative establishments should be provided (119-121); premises should also be provided for local commercial businesses and professions (122).

V. *Dwellings*

The agency should itself provide houses and facilitate building by local authorities and private enterprise, to meet all requirements (123); the proportion of types should correspond to the needs of families, single persons and old people (124-125); standards should be based on official recommendations (126); communal amenities should receive due consideration (127).

VI. *Shops policy*

The shops policy should take account of service to consumers, interests of shopkeepers and return on public capital invested (128-130); the agency should itself provide shop premises and let them to traders at competitive and progressive rents (131-133); the policy to be adopted in fixing rents is recommended (134); leases should specify trades to be carried on (135); number of shops should probably be between 1 to 100 and 1 to 150 persons with competition in each trade (136-137); there should be subsidiary centres and small groups of shops within half a mile of all residents (138); all types of trading organisations should be admitted (139); at the start a general store will be necessary, which might be temporarily managed by the agency (140); a site should be reserved for an open market (141); special attention should be given to the architecture of shopping centres (142); suggestions are made as to street widths and layout, frontages, and height of buildings (143-147); arcaded footways may be too costly, but pedestrian arcades may be desirable (148); forecourts are not recommended, except when a building is set back (149); provision should be made for cycles and perambulators (150).

VII. *Education*

Sites should be allocated in consultation with local authority (151-152); details are given of number and size of sites for public, primary and secondary schools, special schools, and further education (153-160); if new universities are to be built, their location in new towns should be considered (161); facilities should be given for private schools (162); Scottish requirements (163).

VIII. *Health*

Hospital and medical services must take account of regional considerations, and of special circumstances of new towns (164-165); standards are indicated for number of beds required in general, cottage, intermediate, and special hospitals, and for accommodation for chronic illness (166-176); suggestions are made on size and location of health centres, maternity and child welfare clinics, and family and child guidance clinics (177-179); and for day and night nurseries (180-181); in Scotland, combined hospitals are preferred (182-184).

IX. *Social life and recreation*

Social life in new town starts afresh, but will not necessarily lack vigour (185-186); a standard pattern cannot be prescribed, but a demand for certain facilities can be assumed and should be met (187-188); at the start a multi-purpose meeting place should be provided (189); permanent buildings should be provided in advance of full demand (190); suggestions are

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made for buildings for theatre, music, the arts, and dance halls (191-196); there should be an adequate library service (197-199); arrangements should be made for preserving local archives and archaeological remains (200); special attention should be paid to places of refreshment, including hotels and a variety of restaurants as well as teashops and cafés (201-204); licensed premises should vary in character and size, and restaurants serving substantial meals should be able to obtain licences but no lease should be granted to establishments not providing food (205-208); consent should be given to registration of clubs, provided they are not merely drinking saloons (209); a new town should be within a single licensing area (210); for public open space not less than 10 acres per 1,000 persons should be provided (211); suggestions are made for parks, public gardens, playing fields, and allotments (212-218); for children and young people, playgrounds and a variety of club facilities are required (219-222); community centres should cater for all ages (223); suggestions are made as to provision required for indoor and outdoor sports (224-226).

X. *Religious Organisations*

Religious organisations are important in creation of community (227-229); national church organisations should help in provision of buildings (230); sites should be provided for churches on non-profit terms (231); consultation with inter-denominational committees is suggested (232-237); indications are given as to number of sites required (238); parish boundaries should be revised (239).

XI. *Other factors*

Leases should require observance of certain standards in aerials and wiring for radio reception (240-241); possibility of local broadcasting service should be examined (242-246); outside advertising on buildings should be regulated under lease covenants (247); hoardings and notice boards should be few and well-designed (248-249); suggestions are made as to illuminated signs and advertising on railway property (250-251); encouragement should be given to local newspapers (252-253); the agency should issue an information bulletin (254), and should set up an information office (255); land should be allotted for use of territorial army and cadet corps (256); a site should be reserved for burial ground and care given to its layout (257).

D. Execution of Plan

I. *Organisation and Administration*

Constitution of corporations was dealt with in First Interim Report (258); suggestions are now made as to organisation of executive staff and use of consultants (259-262); under director general, there should be business manager, chief architect, chief engineer, estate officer, public relations officer (263); planning is the task of a team, not of one town planner (264).

II. *Programme and Method*

A long-term construction programme should be operated (265); civil engineering work and accommodation of construction force must have priority (266-267); indications are given as to stages of development (268);

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the total capital cost for 50,000 population is estimated as £27 to £36 millions, of which the agency will spend £6 to £7 millions, apart from housing (269-270); a labour force of about 5,000 will be required (271); suggestions are made as to supply of labour and its accommodation (272-274); major constructional work should be by contract, and methods of selecting and remunerating contractors are suggested (275-277 and Appendix 5); suggestions are made as to timing of construction of factories and services (278-280), and as to orderly development and care for amenity (281-282).

III. *Central advisory commission*

Central Advisory Commission was recommended in First Interim Report, and this recommendation is now emphasised (283-284); it should consist of chairman and four or five other members, with requisite experience (285); appointment should be by the appropriate minister, and a joint Commission for England and Wales and Scotland is preferable (286); members should be paid and there should be a small staff (287); its functions are indicated, it should have access to reports of corporations, and its own reports should be published.



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'The new towns have been a great experiment and are on their way to being a great success. Mistakes have been made and there are many problems still to resolve. But for thousands of families they are providing living conditions among the best in Britain; and for industry they are providing the conditions for efficiency. They will prove a first class investment, in money as well as in health and productivity. They will repay study'.



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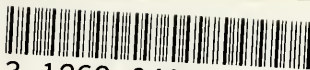
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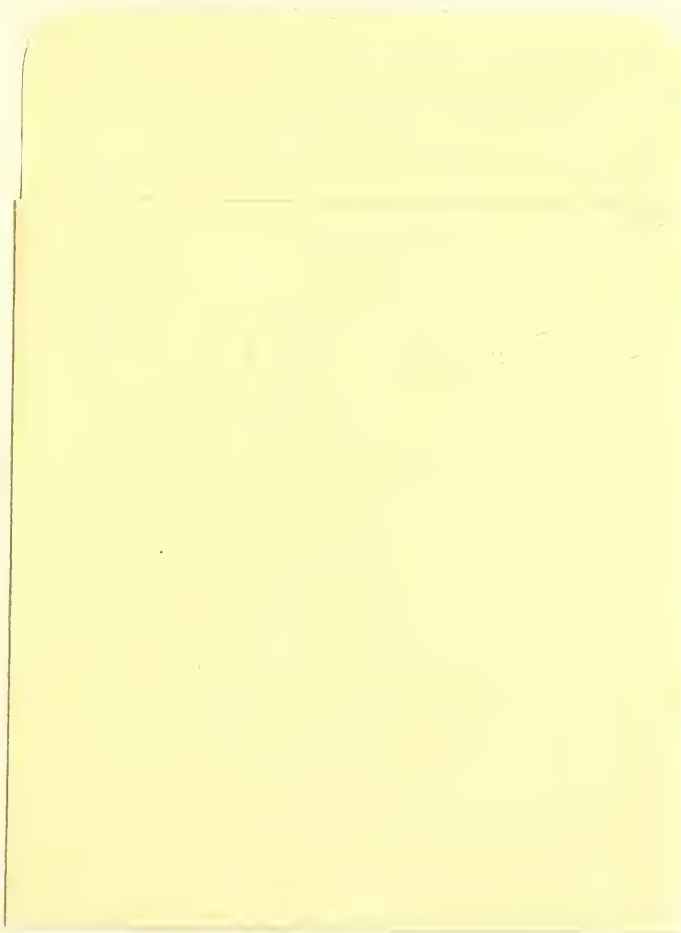


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